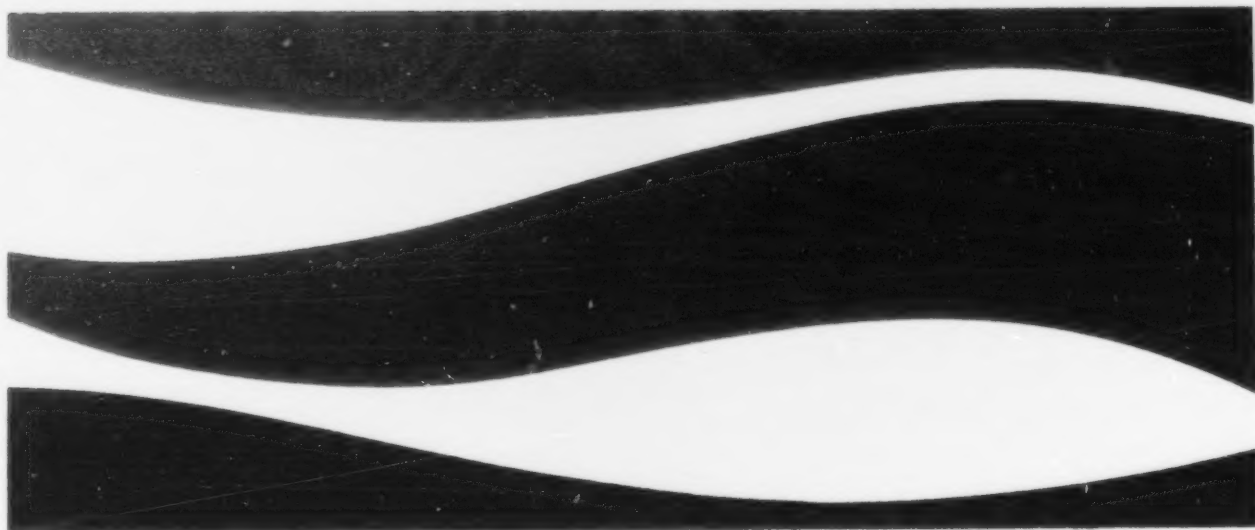


Fisheries Production Statistics Of British Columbia 1988



Province of British Columbia
Ministry of Agriculture and Fisheries
Hon. John Savage, Minister

Aquaculture and Commercial Fisheries Branch
Commercial Fisheries Section



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FISHERIES PRODUCTION STATISTICS
OF BRITISH COLUMBIA
1988

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FOREWORD

This is the eighth annual issue of the Fisheries Production Statistics of British Columbia to be published by the Province of British Columbia. As a result of the transfer of Commercial Fisheries to the Ministry of Agriculture and Fisheries in September of 1986, this issue is the third to be published by this Ministry. Prior to the 1981 edition, production statistics were published by the Department of Fisheries and Oceans, Canada dating back to 1951.

This report provides a summary of fish production statistics reported in the 1988 census of fish processing plants licensed in British Columbia. The format is similar to previous years in which the majority of the text and tables are dedicated to fish landings and production. In addition, information relating to licencing within the fishing and fish processing sectors as well as aquaculture production and price index are also provided.

It should be noted that all information on fish landings and value is provided by the Department of Fisheries and Oceans. It includes direct vessel exports and estimates of year end bonus payments to fishermen. The harvest of non-farmed freshwater fish is not included in the report.

All quantity data are presented in tonnes, except where otherwise indicated, and values are shown in thousands of dollars. One tonne equals 2,204.6 pounds or 1,000 kilograms.

We would like to thank the many people in the industry and various agencies of both governments who contributed to this report. Special thanks to Joyce Weir for preparing the manuscript.

This report was compiled under the direction of T.B. Proverbs.

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I. SUMMARY OF THE BRITISH COLUMBIA FISHING AND FISH
PROCESSING INDUSTRIES - 1988

From the perspective of the overall British Columbia economy, the commercial fishing and fish processing sectors contributed significantly to the provincial gross domestic product. Commercial fishing is the fourth largest primary industry in the province after forestry, mining, and agriculture; and fish processing accounts for over 25 percent of all food manufacturing activity. The wholesale value of British Columbia fish products accounted for nearly 31 percent of the total value of Canadian marine fish production which is estimated at \$3.2 billion.

In 1988, the quantity of British Columbia fish landings increased by 8 percent from 248,875¹ tonnes recorded in 1987 to 267,873 tonnes. The increase in overall landings was primarily attributed to a significant increase in salmon landings. The corresponding landed value also increased by 26 percent from \$455.2¹ million to \$572.7 million. The increased landed value reflects a general increase in landed prices. Total commercial salmon landings and landed value rose significantly over last year by 34 and 47 percent, respectively. The overall herring catch remained near historic levels, but declined slightly to 31,601 tonnes from 1987. Both landings and landed value decreased by 16 and 10 percent respectively. Overall, B.C. halibut landings rose slightly in 1988 while the landed value dropped significantly. Combined groundfish and shellfish fisheries showed marginal decreases in landings and modest increases in landed values. Cooperative or joint venture hake fishing arrangements with foreign nations displayed a minor increase in 1988.

The fish processing sector generated a record total wholesale value of \$999 million in 1988, an increase of 23 percent over the previous year. Commercially caught salmon products recorded a 37 percent increase in wholesale value due in part to the upswing in landings and to generally increased prices. Products derived from farmed salmon also showed dramatic growth in 1988, reaching \$42.8 million. Despite the decrease in landings, the total wholesale value of all herring products increased slightly. Halibut and groundfish showed overall decreases in wholesale values, down 20 and 8 percent respectively.

Regional fish processing activity was distributed much the same as in previous years. As in 1987, approximately 67 percent of the total value of fish products originated from the Lower Mainland region, and 20 percent in the Prince Rupert area. Total average employment, based on 1987 data, was 5,539 with 61 percent concentrated in the Lower Mainland area.

A total of 17,627 personal commercial fishing licences were issued by the Department of Fisheries and Oceans in 1988, including 1,567 five year licences and 16,060 traditional one year licences. However, a total of 5,236 five year licences from previous years were valid during 1988, bringing the total number of eligible fishermen to 21,296. Excluding packers and processors a total of 6,391 vessels were licenced to fish commercially in British Columbia in 1988.

Two hundred and eight firms utilizing 179 plants reported processed fish production in 1988. This figure of 208 includes 36 companies that leased facilities or had fish custom-processed. In addition, production was reported by 14 fishing companies and 47 vessels that exported fresh fish directly to United States ports and 65 salmon mariculture operations. The provincial Aquaculture and Commercial Fisheries Branch issued 248 fish processing licences, 494 fish buying licences, 149 fishermen's vending licences, 258 oyster picking permits and 37 marine plant harvesting licences.

1 Revised

TABLE 1 - QUANTITY AND VALUE OF B.C. FISH LANDINGS BY SPECIES - 1988

	LANDED QUANTITY (Tonnes)	LANDED VALUE (\$'000)	WHOLESALE VALUE (\$'000)
SALMON ¹	84,830	312,087	583,630
SALMON MARICULTURE	<u>6,590</u>	<u>39,084</u>	<u>42,779²</u>
SUBTOTAL	91,420	351,171	626,409
HERRING ³	31,601	96,457	175,536
HALIBUT ⁴	5,866	23,216	30,279
<u>GROUND FISH</u>			
DOGFISH	5,314	2,182	4,041
FLOUNDER	142	62	121
HAKE ⁵	56,335	8,909	8,973
LINGCOD	3,444	2,622	4,957
PACIFIC COD	11,024	5,766	10,974
PACIFIC OCEAN PERCH	6,787	3,535	4,193
POLLOCK	460	89	1,060
ROCKFISH ⁶	20,016	13,524	24,643
SABLEFISH	5,291	18,444	20,566
SKATE	588	92	230
SOLE	5,138	4,079	9,418
TURBOT	340	88	260
OTHER GROUND FISH	<u>657⁷</u>	<u>256⁷</u>	<u>4,406⁸</u>
SUBTOTAL	115,536	59,648	93,842
<u>SHELL FISH</u>			
ABALONE	49	1,096	1,059
CLAMS ⁹	4,841	8,068	12,748
CRABS	1,532	6,068	9,196
GEODUCKS	4,567	9,807	16,066
OCTOPUS	209	651	561
OYSTERS	3,702	2,725	3,982
SEA URCHINS	2,559	1,822	13,467
SHRIMP & PRAWNS	3,280	9,121	12,038
OTHER SHELL FISH	<u>2,377¹⁰</u>	<u>2,084¹⁰</u>	<u>3,082¹¹</u>
SUBTOTAL	23,116	41,442	72,199
<u>OTHER SPECIES</u>			
STURGEON	5	11	11
TUNA	165 ¹²	512 ¹²	479
OTHER	<u>164¹³</u>	<u>186¹³</u>	<u>154¹⁴</u>
SUBTOTAL	334	709	644
TOTAL	267,873	572,643	998,909

TABLE 1 - CONT'D - FOOTNOTES

- 1 Includes salmon roe. Wholesale value includes production derived from U.S. salmon.
- 2 Includes a small quantity of freshwater trout production.
- 3 Includes herring spawn on kelp.
- 4 Includes total landings at United States ports of 818 tonnes valued at \$3,513,439.
- 5 Includes 49,974 tonnes of hake worth \$7,989,873 delivered to foreign vessels in co-operative or joint venture fishing arrangements.
- 6 Includes reedi, greenies, other rockfish, red snapper and silver perch.
- 7 Includes non-food fish, idiotfish and shark.
- 8 Includes other groundfish, portions, sticks and specialities, fish meal n.e.s, fish oil n.e.s., and solubles n.e.s.
- 9 Includes horse clams.
- 10 Includes scallops, squid, mussels, gooseneck barnacles, crayfish, snails, sea cucumbers, plankton, and other shellfish n.e.s.
- 11 Includes squid, scallops, mussels, sea cucumbers, gooseneck barnacles, and other shellfish n.e.s.
- 12 Includes 128 tonnes worth \$403,628 caught in U.S. and international waters and landed in Canada by Canadian fishermen.
- 13 Includes eulachons, smelt, hagfish, anchovies and other fish.
- 14 Includes eulachons, smelt, seaweed and floating kelp.

Note: Salmon is reported in standard form; i.e., net caught is reported in round weight and troll caught is reported dressed head-on; halibut is reported dressed head-off; all other fish are reported in round weight.

TABLE 2 - LANDED AND WHOLESALE VALUE OF FISH AND FISH PRODUCTS IN B.C.

1977 - 1988

Excludes halibut and tuna
landed by B.C. fishermen at
U.S. ports and hake sold to
foreign processors

Includes halibut and tuna landed by
B.C. fishermen at U.S. ports and
hake sold to foreign processors

YEAR	LANDED VALUE (\$'000)	WHOLESALE VALUE (\$'000)	LANDED VALUE (\$'000)	% CHANGE	WHOLESALE VALUE (\$'000)	% CHANGE
1977	165,005	359,905	167,905	+ 18	362,556	+ 22
1978	243,731	510,667	250,805	+ 49	517,741	+ 43
1979	330,019	563,181	332,972	+ 33	566,134	+ 9
1980	180,529	402,191	184,108	- 45	405,770	- 28
1981	232,358	523,754	236,156	+ 28	526,928	+ 30
1982	235,519	461,159	241,205	+ 2	466,845	- 11
1983	203,094	465,090	209,772	- 13	471,768	+ 1
1984	236,028	460,036	242,930	+ 16	466,938	- 1
1985	372,324 ¹	722,243 ²	377,646	+ 55	727,565 ²	+ 56 ²
1986 ³	394,525	759,341	404,687	+ 7	769,410	+ 6
1987 ³	443,203 ²	797,541 ²	455,168 ²	+ 12	809,206 ²	+ 5
1988 ³	560,736	987,406	572,643	+ 26	998,909	+ 23

¹ Includes tuna caught by Canadian fishermen in U.S. waters and landed in Canada.

² Revised data.

³ Includes the value of farmed salmonid production.

TABLE 3 - DISTRICT CATCH BY SPECIES - 1988 (LANDED WEIGHT IN TONNES)

Species	North ¹ Coast	South Coast	Fraser Area	Total	Landed Value (\$'000)
Chinook	1,819	3,238	81	5,138	43,795
Sockeye	7,528	2,173	2,142	11,843	96,408
Coho	1,684	4,386	85	6,155	37,688
Pink	29,615	1,851	2	31,468	49,303
Chum	15,059	14,618	449	30,126	84,621
Steelhead	87	5	1	93	250
Subtotal	55,792	26,271	2,760	84,823	312,065
Salmon Roe	3	2	2	7	22
TOTAL SALMON ²	55,795	26,273	2,762	84,830	312,087
Herring	12,880	18,503	*	31,383	83,523
Herring Spawn on Kelp	187	31	-	218	12,934
TOTAL HERRING	13,067	18,534	*	31,601	96,457
Halibut ³	4,413	635	-	5,048	19,703
Dogfish	483	4,654	177	5,314	2,182
Flounder	55	87	*	142	62
Hake ⁴	-	1,461	4,900	6,361	919
Ling Cod	1,506	1,936	2	3,444	2,622
Pacific Cod	7,160	3,855	9	11,024	5,766
Pacific Ocean Perch	5,377	1,410	-	6,787	3,535
Pollock	12	110	338	460	89
Rockfish ⁵	9,804	10,200	12	20,016	13,524
Sablefish	2,093	3,198	*	5,291	18,444
Skate	483	103	2	588	92
Soles	3,514	1,623	1	5,138	4,079
Turbot	184	156	-	340	88
Other Groundfish ⁶	483	174	*	657	256
Groundfish Subtotal	31,154	28,967	5,441	65,562	51,658
Abalone	45	4	-	49	1,096
Clams ⁷	156	4,676	9	4,841	8,068
Crabs	524	552	456	1,532	6,068
Geoducks	2,026	2,523	18	4,567	9,807
Octopus	41	167	1	209	651
Oysters	-	3,702	-	3,702	2,725
Shrimp and Prawns	265	2,808	207	3,280	9,121
Scallops	*	60	7	67	289
Sea Cucumbers	580	1,340	1	1,921	984
Sea Urchins	437	2,092	30	2,559	1,822
Other Shellfish ⁸	4	383	2	389	811
Shellfish Subtotal	4,078	18,307	731	23,116	41,442

TABLE 3 - CONT'D

Species	North Coast	South Coast	Fraser Area	Total	Landed Value (\$'000)
Eulachons	-	11	29	40	37
Hagfish	-	66	-	66	66
Smelt	-	*	1	1	3
Sturgeon	*	1	4	5	11
Tuna ⁹	12	25	-	37	108
Other ¹⁰	*	57	-	57	80
Other Subtotal	12	160	34	206	305
TOTAL ¹¹	108,519	92,876	8,968	210,363	521,652

- 1 Includes landings in the Taku/Stikine district.
- 2 Excludes production from salmon mariculture operations.
- 3 Excludes 818 tonnes of halibut valued at \$3,513,439 landed at U.S. ports.
- 4 Excludes 49,974 tonnes of hake worth at \$7,989,873 delivered to foreign vessels in joint venture or co-operative fishing arrangements. An additional 39,715 tonnes was caught by foreign vessels in Canadian waters.
- 5 Includes reedi, greenies, other rockfish, red snapper and silver perch.
- 6 Includes non-food fish, idiotfish and shark.
- 7 Includes horse clams.
- 8 Includes mussels, gooseneck barnacles, snails, squid, plankton, crayfish and other shellfish N.E.S.
- 9 Excludes 128 tonnes worth \$403,628 caught in U.S. and international waters and landed in Canada by Canadian fishermen.
- 10 Includes anchovies and other fish.
- 11 Includes direct deliveries by Canadian fishermen to U.S. ports.

* Less than 1 tonne reported.

Note: Salmon is reported in standard form; i.e., net caught is reported in round weight and troll caught is reported dressed head-on; halibut is reported dressed head-off; and all other fish are reported in round weight.

TABLE 4 - REGIONAL WHOLESALE VALUE OF B.C. FISHERIES PRODUCTION BY PRODUCT CATEGORY 1987 - 1988¹

(\$000)

PRODUCT CATEGORY	LOWER MAINLAND		VANCOUVER IS.		SUNSHINE COAST		CENTRAL & NORTH COAST		TOTAL B.C.	
	1987	1988	1987	1988	1987	1988	1987	1988	1987	1988
Fresh	66,863 ³	79,631	31,951 ³	29,346	4,823 ³	10,044	12,249 ³	18,002	115,893 ³	137,023
Frozen	169,816 ³	220,491	47,011	61,936	1,976	3,951	62,095 ³	74,252	280,898 ³	360,630
Cured	160,401	183,579	12,213 ³	11,541	686	2,063	35,722	40,594	209,022 ³	237,777
Canned	115,904	163,178	2,566	7,285	-	-	53,222	67,019	171,692	237,482
Other	18,002	13,467	276	228	1	13	1,757	786	20,036	14,494
GRAND TOTAL	530,991 ³	660,346	94,017 ³	110,336	7,488	16,071	165,045	200,653	797,541 ³	987,406

¹ Excludes over-the-side hake sales, and halibut and tuna landed in U.S. ports but includes salmonid mariculture production.

² Includes a small amount of production from the interior region.

³ Revised data.

II. SUMMARY BY SPECIES

A) SALMON

In 1988, the salmon industry in British Columbia displayed significant growth over the previous year, which in many ways represented historic long-term averages. Salmon landings increased by 34 percent from 63,515 tonnes in 1987 to 84,830 tonnes. The landed value increased from \$212.1 million to \$312.1 million, a 47 percent change. This was due primarily to substantially increased landings of chum and pink. Further, the chinook catch was up over 1987. All species showed substantial increases in average landed prices. The greatest increase was demonstrated by sockeye with a dramatic 39 percent increase in landed price to \$8.07 per kg in 1988. Both chinook and coho continued their climb in landed price to \$7.40 per kg and \$5.33 per kg respectively, representing 27 and 33 percent increases over the previous year. Average steelhead landed prices rose by 37 percent from last year. In 1988, despite being well below historic average catches, sockeye still accounted for 31 percent of the total landed value of all salmon species, due primarily to its high average prices.

Seine gear accounted for 58 percent of salmon landings, while troll gear was responsible for 20 percent and gillnet gear 22 percent. Seiners harvested large quantities of pink, chum and sockeye salmon. A significant amount of chum, along with the majority of sockeye and steelhead was landed on gillnet gear. Troll gear accounted for the majority of chinook and coho landings, along with 15 percent of the pink catch.

As a result of the increased level of landings, the total 1988 salmon wholesale value of \$583.6 million was up 37 percent from the 1987 total of \$425.6 million and even surpassed the record of \$536.2 million set in 1986. The total wholesale values of all species except coho increased. Despite the larger overall salmon harvest, the relatively small sockeye catch may have elevated average prices for canned and frozen dressed sockeye. It also, to some extent, contributed to the substantial increases to the price for all species of canned salmon and contributed to a relatively large overall wholesale value. Salmon production contributed 58 percent to the total wholesale value generated by the British Columbia fish processing industry in 1988, up by 5 percent from 1987.

There was little change in the mix of salmon products in 1988 from the previous year. Canned salmon accounted for approximately 40 percent of the total salmon wholesale value, as it did in 1987. Frozen salmon products contributed 46 percent to the 1988 salmon value, up by 1 percent from last year. This lack of shift is unusual. In most years, a shift occurs due mainly to the changes in volumes and mix of salmon species harvested. In 1988 large quantities of chum and pink were directed towards the canned market. However substantial quantities of these, especially of chum, were also directed towards the frozen dressed market along with the majority of the chinook and coho production.

In total, the 1988 canned salmon pack consisted of 1,184,057 standard cases, up from the 1987 total of 1,008,682 cases. Compared to 1987, the 1988 pack represented a 17 percent increase in volume and a 38 percent increase in wholesale value.

In 1988, pink salmon accounted for 62 percent, chum 18, sockeye 17, coho 2, and others less than one percent of the number of cases produced. In terms of wholesale value, however, pink contributed 56 percent to the total canned salmon value, while sockeye accounted for 29 percent, chum 12 percent and coho 2 percent. All species of salmon exhibited dramatic increases in average wholesale prices of canned products, the most notable of which was chinook, with a 46 percent increase over the previous year. Overall, the reported net selling value for all canned salmon was 5 percent less than the total wholesale value.

Fresh dressed salmon production was nearly evenly divided between head-on and head-off products, as it was in 1987 at 43 and 57 respectively, while most frozen dressed salmon was marketed in a head-off form. Frozen dressed, head-off salmon accounted for 74 percent of the total dressed production in 1988 compared to 67 percent in 1987, with the highest price received for frozen dressed, head-off sockeye at \$14.57/kg.

The total wholesale value of smoked salmon decreased to \$19.3 million, down by 10 percent from the previous year and accounted for 3 percent of the value of all salmon products. Cold smoked salmon accounted for 94 percent of the wholesale value of smoked salmon production, down from 96 percent in the previous year. Prices for cold-smoked salmon continued to escalate in 1988 with sockeye reaching \$25.96 per kg, an increase of 19 percent over last year. In 1988, data on specialty smoked salmon products was separated from cold and hot smoked products and accounted for \$440 thousand.

Also, for the first time in 1988, data on portion pack/specialty items were collected. These value-added products generated \$2 million in total wholesale value.

Fresh, salted, and other products, as well as roe and salmon by-products were also processed. These different products accounted for approximately 10 percent of the total salmon wholesale value.

It should be noted that this discussion, and Tables 5 to 22 following, reflect production from commercially caught wild salmon only. In 1988, fish processing facilities generated \$42.8 million worth of products derived from marine pen-reared salmonids. These products will be discussed in subsection F of the report. In total, including salmon from all sources, the B.C. industry generated \$626.4 million in salmon products or approximately 63 percent of the total B.C. wholesale value.

TABLE 5 - LANDINGS OF SALMON BY SPECIES AND STATISTICAL AREA - 1988¹

(Round weight in tonnes)

AREA	CHINOOK	SOCKEYE	COHO	PINK	CHUM	STEELHEAD	TOTAL
TAKU	5	33	14	1	4	*	58
STIKINE	<u>9</u>	<u>38</u>	<u>8</u>	<u>1</u>	<u>3</u>	<u>1</u>	<u>60</u>
SUBTOTAL	13	71	22	2	7	1	118
<u>NORTH COAST</u>							
1	942	227	738	3,299	472	1	5,680
2E	93	2	210	263	1,686	*	2,255
2W	449	14	75	204	37	*	780
3	73	740	137	1,030	850	8	2,838
4	217	3,638	158	1,022	1,186	63	6,285
5	68	100	67	494	199	1	929
6	73	176	197	11,050	4,138	2	15,634
7	45	6	74	593	1,437	*	2,155
8	68	420	146	11,755	4,831	9	17,229
9	10	1,206	29	410	249	1	1,905
10	12	956	29	96	57	*	1,152
30	<u>2</u>	<u>*</u>	<u>5</u>	<u>8</u>	<u>1</u>	<u>-</u>	<u>16</u>
SUBTOTAL	2,054	7,485	1,864	30,226	15,144	86	56,858
<u>SOUTH COAST</u>							
11	157	31	364	192	102	*	846
12	59	258	237	1,024	2,456	2	4,037
13	47	114	123	83	2,783	*	3,151
14	51	5	269	2	189	*	517
15	8	*	28	*	-	-	36
16	3	19	6	*	*	*	27
17	10	24	37	*	110	-	181
18	2	113	6	*	255	*	376
19	-	-	-	-	-	-	-
20	43	763	105	8	57	1	977
21	82	1	245	1	8,393	*	8,723
22	-	-	-	-	-	-	-
23	1,152	734	1,281	33	31	1	3,232
24	717	48	952	25	39	*	1,781
25	300	26	377	42	40	*	785
26	295	18	378	63	43	*	797
27	<u>847</u>	<u>75</u>	<u>697</u>	<u>513</u>	<u>198</u>	<u>*</u>	<u>2,330</u>
SUBTOTAL	3,773	2,228	5,105	1,988	14,696	5	27,795
<u>FRASER AREA</u>							
28	-	-	-	-	-	-	-
29AB	47	2,003	67	2	345	1	2,464
29C	*	5	*	-	1	-	6
29D	35	151	19	-	104	*	309
29E	<u>-</u>	<u>-</u>	<u>*</u>	<u>-</u>	<u>*</u>	<u>-</u>	<u>*</u>
SUBTOTAL	81	2,159	86	2	449	1	2,778
TOTAL B.C.	5,921	11,943	7,077	32,217	30,297	93	87,548

* Less than 500 kg.

¹ Rows and columns may not total exactly, due to rounding. See Appendix I for Statistical Area Maps.

Source: Department of Fisheries and Oceans, Pacific Region.

TABLE 6 - LANDINGS OF SALMON BY SPECIES AND GEAR 1977 - 1988

(Round Weight in Tonnes)

GILLNET GEAR										AVERAGE			
	CHINOOK	SOCKEYE	COHO	PINK	CHUM	TOTAL ¹	VALUE	NUMBER OF DELIV.	AVERAGE CATCH PER DELIV.	AVERAGE VALUE PER DELIV.			
	(t)	(t)	(t)	(t)	(t)	(t)	(\$'000)	('000)	(kg)	(\$)			
1977	1,129	10,793	1,357	5,470	3,229	22,028	34,416	83	265	415			
1978	997	7,819	1,281	2,319	6,641	19,102	38,687	69	277	561			
1979	886	7,435	774	2,146	2,151	13,430	34,796	52	258	669			
1980	670	3,265	848	1,711	7,548	14,084	31,042	51	276	609			
1981	652	9,031	562	4,660	3,182	18,153	39,222	53	342	740			
1982	917	9,817	870	526	5,525	17,742	41,387	51	348	811			
1983	594	4,472	531	3,886	2,575	12,100	20,586	46	263	448			
1984	763	6,542	518	1,826	2,988	12,761	35,674	51	250	699			
1985	525	13,461	857	4,012	6,211	25,218	67,387	70	360	962			
1986	516	11,073	981	4,217	9,216	26,130	67,689	65	402	1,041			
1987	271	6,619	380	4,464	4,236	16,027	54,327	47	341	1,156			
1988	485	7,591	417	1,745	8,966	19,281	90,036	55	351	1,637			

SEINE GEAR										AVERAGE			
	CHINOOK	SOCKEYE	COHO	PINK	CHUM	TOTAL ¹	VALUE	NUMBER OF DELIV.	AVERAGE CATCH PER DELIV.	AVERAGE VALUE PER DELIV.			
	(t)	(t)	(t)	(t)	(t)	(t)	(\$'000)	('000)	(kg)	(\$)			
1977	926	6,237	1,981	12,814	2,696	24,661	29,697	16	1,541	1,856			
1978	886	11,107	1,108	12,326	8,901	34,337	57,796	13	2,641	4,446			
1979	903	5,861	1,539	13,983	2,425	24,717	42,522	12	2,060	3,544			
1980	588	4,327	1,252	9,650	8,972	24,796	41,854	12	2,066	3,488			
1981	774	11,636	1,430	24,297	2,847	40,994	63,864	10	4,099	6,386			
1982	780	12,617	1,245	3,148	9,147	26,952	51,818	10	2,695	5,181			
1983	496	9,006	1,354	30,207	2,150	43,225	48,443	11	3,930	4,404			
1984	444	5,791	843	7,811	5,603	20,514	38,399	13	1,578	2,953			
1985	733	14,735	1,410	25,996	15,769	58,676	106,902	14	4,190	7,635			
1986	580	12,944	1,776	23,679	14,152	53,156	101,972	14	3,797	7,284			
1987	355	6,283	985	15,415	6,413	29,465	68,117	10	2,947	6,812			
1988	298	3,693	620	25,559	20,218	50,401	122,919	14	3,600	8,780			

TABLE 6 - CONT'D

	TROLL GEAR				TOTAL ¹	VALUE	NUMBER OF DELIV.	AVERAGE CATCH PER DELIV.	AVERAGE VALUE PER DELIV.
	CHINOOK	SOCKEYE	COHO	PINK					
	(t)	(t)	(t)	(t)	(t)	(\$'000)	('000)	(kg)	(\$)
1977	5,467	358	6,519	6,439	18,893	44,612	146	129	303
1978	6,004	3,395	6,763	686	17,165	61,681	150	114	411
1979	5,056	1,236	8,029	8,567	23,067	83,215	163	142	511
1980	5,282	135	6,925	2,357	14,991	44,107	189	79	233
1981	4,490	333	5,522	9,296	19,774	54,984	164	121	335
1982	5,395	7,709	7,182	303	21,010	71,897	169	124	420
1983	4,288	848	8,576	5,445	19,334	42,056	170	114	247
1984	5,047	544	8,728	2,422	17,157	70,725	138	124	513
1985	4,211	3,373	6,710	7,692	23,669	72,381	124	191	584
1986	3,911	6,816	10,481	1,609	24,652	96,113	112	220	858
1987	4,623	2,133	7,050	7,042	21,203	89,616	84	252	1,067
1988	5,138	659	6,040	4,913	17,866	99,110	86	208	1,152

1 Totals include steelhead.

2 1977-1983 values do not include year-end bonus or direct delivery payments. 1984-1987 values include year-end bonus payments. 1985 values include direct delivery payments.

TABLE 7 - SHARE OF SALMON LANDINGS BY SPECIES AND GEAR - 1988¹

(Round Weight in Tonnes)

<u>SPECIES</u>	<u>Gillnet</u> <u>Tonnes</u>	<u>Share</u> <u>%</u>	<u>Seine</u> <u>Tonnes</u>	<u>Share</u> <u>%</u>	<u>Troll</u> <u>Tonnes</u>	<u>Share</u> <u>%</u>	<u>Total</u> <u>Tonnes</u>
Chinook	485	8.2	298	5.0	5,138	86.8	5,921
Sockeye	7,591	63.6	3,693	30.9	659	5.5	11,943
Coho	417	5.9	620	8.8	6,040	85.3	7,077
Pink	1,745	5.4	25,559	79.3	4,913	15.3	32,217
Chum	8,966	29.6	20,218	66.7	1,113	3.7	30,297
Steelhead	77	82.8	13	14.0	3	3.2	93
TOTAL	19,281	22.0	50,401	57.6	17,866	20.4	87,548

TABLE 8 - LANDED AND WHOLESALE VALUE OF SALMON BY PRODUCT TYPE 1977 - 1988

(\$'000)

	<u>LANDED</u> ¹ <u>VALUE</u>	<u>CANNED</u>	<u>FRESH</u>	<u>FROZEN</u>	<u>ROE</u>	<u>OTHER</u>	<u>TOTAL</u> <u>WHOLESALE</u> <u>VALUE</u>
1977	109,176	122,987	10,059	76,049	12,618	6,079	227,792
1978	158,686	115,913	14,584	134,416	24,202	14,904	304,019
1979	161,113	115,927	8,127	143,093	11,393	11,087	289,627
1980	117,149	146,828	10,429	109,300	13,209	9,341	289,107
1981	158,226	237,391	6,744	108,047	12,802	8,694	373,678
1982	165,207	127,126	10,633	155,762	9,829	11,988	315,338
1983	111,097	176,191	13,414	80,873	3,186	10,625	284,289
1984	144,814	94,457	15,432	145,679	5,065	15,608	276,241
1985	246,696	258,646	14,137	206,647	12,019	20,794	512,243
1986	265,778	277,913	19,244	198,557	13,947	26,562	536,223
1987	212,063	171,573	24,773	189,824	9,180	30,251	425,601
1988	312,087	236,780	23,944	265,686	20,289	36,931	583,630

1 Includes salmon roe.

TABLE 9 - LANDED AND WHOLESALE VALUE OF SALMON BY SPECIES 1977 - 1988

	Quantity Landed in Tonnes (Round Weight)	Landed Value (\$'000)	Average Landed Price (\$/kg)	Wholesale Value (\$'000) ¹	Landed Value as a Percent of Wholesale Value (%)
CHINOOK					
1977	7,522	23,589	3.14	36,832	64.0
1978	7,887	29,461	3.74	35,897	82.1
1979	6,845	31,159	4.55	40,475	77.0
1980	6,540	24,307	3.72	38,421	63.3
1981	5,916	25,731	4.35	38,051	67.6
1982	7,092	31,205	4.40	41,490	75.2
1983	5,378	17,614	3.28	29,489	59.7
1984	6,254	37,318	5.97	45,861	81.4
1985	5,469	25,564	4.67	41,433	61.7
1986	5,007	19,658	3.93	31,206	63.0
1987	5,249	30,527	5.82	41,489	73.6
1988	5,921	43,795	7.40	57,979	75.5
SCKEYE					
1977	17,388	32,218	1.85	65,497	49.2
1978	22,321	55,181	2.47	107,817	51.2
1979	14,532	43,307	2.98	81,008	53.5
1980	7,727	18,222	2.36	47,416	38.4
1981	21,000	54,577	2.60	122,073	44.7
1982	30,143	78,860	2.62	155,363	50.8
1983	14,326	36,617	2.56	83,988	43.6
1984	12,877	45,976	3.57	84,191	54.6
1985	31,569	120,428	3.81	206,338	58.4
1986	30,833	143,270	4.65	237,871	60.2
1987	15,035	87,381	5.81	147,997	59.0
1988	11,943	96,408	8.07	150,134	64.2
COHO					
1977	9,857	22,671	2.30	35,396	64.0
1978	9,152	27,269	2.98	41,023	66.5
1979	10,342	44,063	4.26	57,203	77.0
1980	9,025	23,078	2.56	43,568	53.0
1981	7,514	22,009	2.93	37,984	57.9
1982	9,297	26,144	2.81	42,582	61.4
1983	10,461	22,504	2.15	39,306	57.3
1984	10,089	35,532	3.52	59,624	59.6
1985	8,977	26,555	2.96	48,362	54.9
1986	13,238	39,264	2.97	66,090	59.4
1987	8,415	33,747	4.01	61,803	54.6
1988	7,077	37,688	5.33	59,134	63.7

TABLE 9 - CONT'D

	Quantity Landed in Tonnes (Round Weight)	Landed Value (\$'000)	Average Landed Price (\$/kg)	Wholesale Value (\$'000) ¹	Landed Value as a Percent of Wholesale Value (%)
PINK					
1977	24,723	22,262	0.90	54,767	40.6
1978	15,331	12,835	0.84	37,852	33.9
1979	24,696	29,685	1.20	76,867	38.6
1980	13,718	15,118	1.10	50,425	30.0
1981	38,253	45,822	1.20	117,302	39.1
1982	3,977	3,195	0.80	13,675	23.4
1983	39,538	26,651	0.67	103,767	25.7
1984	12,059	10,742	0.89	38,195	28.1
1985	37,700	38,979	1.03	115,160	33.8
1986	29,505	25,691	0.87	96,812	26.5
1987	26,921	33,479	1.24	102,293	32.7
1988	32,217	49,303	1.53	160,956	30.6
CHUM					
1977	6,032	7,905	1.31	16,623	47.6
1978	15,855	33,336	2.10	50,878	65.5
1979	4,751	12,243	2.58	21,262	57.6
1980	16,809	36,197	2.15	63,960	56.6
1981	6,157	9,781	1.59	21,653	45.2
1982	15,091	25,528	1.69	42,768	59.7
1983	4,899	7,605	1.55	14,735	51.6
1984	9,003	14,938	1.66	34,835	42.9
1985	23,646	34,755	1.47	75,907	45.8
1986	25,197	37,614	1.49	77,904	48.3
1987	11,000	26,779	2.43	55,926	47.9
1988	30,297	84,621	2.79	145,581	58.1
STEELHEAD					
1977	59	80	1.36	223	35.9
1978	57	82	1.44	258	31.8
1979	48	96	2.00	250	38.4
1980	52	81	1.56	247	32.8
1981	81	147	1.81	387	38.0
1982	104	170	1.63	520	32.7
1983	57	94	1.65	308	30.5
1984	150	292	1.95	1,032	28.3
1985	202	389	1.92	857	45.4
1986	158	277	1.75	895	30.9
1987	75	147	1.96	445	33.0
1988	93	250	2.69	842	29.7

¹ Revised. Does not include the wholesale value derived from salmon caught in U.S. waters and canned in British Columbia.

TABLE 10 - WHOLESALE VALUE OF SALMON BY SPECIES 1977 - 1988

(\$'000)

	<u>CHINOOK</u>	<u>SOCKEYE</u>	<u>COHO</u>	<u>PINK</u>	<u>CHUM</u>	<u>STEEL- HEAD</u>	<u>NOT CLASSIFIED</u>	<u>TOTAL WHOLESALE VALUE</u>
1977	36,832	65,579	35,431	59,217	16,676	223	13,834	227,792
1978	35,897	107,817	41,023	39,544	50,878	258	28,602	304,019
1979	40,475	81,008	57,203	76,867	21,262	250	12,562	289,627
1980	38,427	68,224	43,645	58,655	64,608	248	15,300	289,107
1981	38,073	131,030	38,433	128,553	22,271	387	14,931	373,678
1982	41,495	158,492	42,595	17,813	42,887	520	11,536	315,338
1983	29,490	84,996	39,384	109,732	14,777	308	5,602	284,289
1984	45,863	86,165	59,772	44,761	35,815	1,032	2,833	276,241
1985	41,435	206,810	48,762	135,376	76,705	857	2,298	512,243
1986	31,235	244,337	68,307	108,403	79,707	895	3,339	536,223
1987	41,505	154,162	63,025	106,330	56,540	445	3,594	425,601
1988	57,979	154,054	59,350	161,690	146,086	842	3,629	583,630

TABLE 11 - PRODUCTION AND UTILIZATION OF SALMON BY SPECIES 1987 - 1988

	<u>1987</u>			<u>1988</u>			
	<u>UNIT</u>	<u>QUANTITY</u>	<u>VALUE¹</u> <u>(\$'000)</u>	<u>AVERAGE²</u> <u>PRICE</u> <u>(\$)</u>	<u>QUANTITY</u>	<u>VALUE¹</u> <u>(\$'000)</u>	<u>AVERAGE²</u> <u>PRICE</u> <u>(\$)</u>
<u>CHINOOK</u>							
Canned.....48-lb. cases		3,667	378	102.74	3,092	465	150.44
Fresh Round.....000 kg		*	*	-	*	*	-
Fresh Dressed.....000 kg		496	4,461	9.00	392	3,690	9.42
Frozen Round.....000 kg		-	-	-	*	*	-
Frozen Dressed.....000 kg		3,323	31,846	9.58	3,996	48,988	12.26
Frozen Steaks.....000 kg		*	*	-	3	26	9.95
Salted.....000 kg		62	827	13.37	35	527	15.10
Smoked.....000 kg		203	3,966	19.56	166	3,392	20.43
Roe.....000 kg		4	27	7.65	61	891	14.67
TOTAL		-	41,505	-	-	57,979	-
<u>SOCKEYE</u>							
Canned.....48-lb. cases		309,597	82,458	266.34	206,715	69,098	334.27
Fresh Round.....000 kg		*	*	-	*	*	-
Fresh Dressed.....000 kg		494	4,475	9.05	399	4,735	11.87
Frozen Round.....000 kg		-	-	-	-	-	-
Frozen Dressed.....000 kg		4,819	50,110	10.40	3,852	54,962	14.27
Frozen Steaks.....000 kg		18	251	13.56	25	284	11.54
Salted.....000 kg		381	4,435	11.64	798	12,412	15.55
Smoked.....000 kg		520	11,341	21.81	417	10,357	24.81
Roe.....000 kg		154	1,092	7.10	197	1,565	7.95
Portion Pack/Specialty		-	-	-	48	641	13.29
Products.....000 kg		*	*	-	-	-	-
Other.....000 kg		-	-	-	-	-	-
TOTAL		-	154,162	-	-	154,054	-

TABLE 11 - CONT'D

UNIT	1987		1988	
	QUANTITY	AVERAGE ² PRICE (\$)	VALUE ¹ (\$'000)	AVERAGE ² PRICE (\$)
COHO				
Canned.....48-lb. cases	29,546 *	176.66	5,220 *	211.14
Fresh Round.....000 kg	974 *	7.32	7,134 *	6.87
Fresh Dressed.....000 kg	5,642 *	8.52	48,066 *	10.63
Frozen Round.....000 kg	84 *	11.35	950 *	20.56
Frozen Dressed.....000 kg	30 *	19.98	603 *	8.43
Frozen Steaks.....000 kg	76 *	13.88	1,052 *	20.12
Salted.....000 kg	- *	-	-	11.86
Smoked.....000 kg	- *	-	-	22.15
Roe.....000 kg	- *	-	-	-
Portion Pack/Specialty	- *	-	-	-
Products.....000 kg	- *	-	-	-
Other.....000 kg	- *	-	-	-
TOTAL	-	-	63,025	-
PINK				
Canned.....48-lb. cases	602,539	128.05	77,154	180.85
Fresh Round.....000 kg	1	2.12	2	-
Fresh Dressed.....000 kg	728	3.79	2,760	3.76
Frozen Round.....000 kg	-	-	-	-
Frozen Dressed.....000 kg	5,507 *	4.26	23,447 *	5.52
Frozen Steaks.....000 kg	- *	-	-	8.35
Salted.....000 kg	- *	-	-	-
Smoked.....000 kg	84	14.84	1,250	18.13
Roe.....000 kg	292	5.88	1,717	5.52
TOTAL	-	-	106,330	-

TABLE 11 - CONT'D

	1987				1988			
	UNIT	QUANTITY	VALUE ¹ (\$'000)	AVERAGE ² PRICE (\$)	QUANTITY	VALUE ¹ (\$'000)	AVERAGE ² PRICE (\$)	
CHUM								
Canned.....48-lb. cases		62,909	6,309	100.29	215,586	29,323	136.02	
Fresh Round.....000 kg		285	1,099	3.86	427	1,225	2.87	
Fresh Dressed.....000 kg		1,026	4,817	4.70	1,572	8,149	5.18	
Frozen Round.....000 kg	*	*	*	-	-	-	-	
Frozen Dressed.....000 kg		6,079	32,544	5.35	14,287	85,913	6.01	
Frozen Steaks.....000 kg		308	2,264	7.36	220	1,990	9.05	
Salted.....000 kg	*	*	*	-	*	*	-	
Smoked.....000 kg		331	4,215	12.73	261	3,777	14.46	
Roe.....000 kg		478	5,292	11.07	1,284	15,709	12.24	
Other.....000 kg	*	*	*	-	*	*	-	
TOTAL	-	-	56,540	-	-	146,086	-	
STEELHEAD								
Canned.....48-lb. cases		424	54	126.64	620	86	139.51	
Fresh Round.....000kg	*	*	*	-	-	-	-	
Fresh Dressed.....000kg	3	3	14	4.75	10	55	5.38	
Frozen Round.....000kg	-	-	-	-	-	-	-	
Frozen Dressed.....000kg	56	56	316	5.62	87	605	6.93	
Frozen Steaks.....000kg	-	-	-	-	-	-	-	
Smoked.....000kg	5	5	61	12.93	6	96	15.89	
Other.....000kg	-	-	-	-	-	-	-	
TOTAL	-	-	445	-	-	842	-	

TABLE 11 - CONT'D

	1987		1988				
	UNIT	QUANTITY	VALUE ¹ (\$'000)	AVERAGE ² PRICE (\$)	QUANTITY	VALUE (\$'000)	AVERAGE PRICE (\$)
<u>ALL SALMON³</u>							
Canned.....48-lb.cases		1,008,682	171,573	170.09	1,184,057	236,780	199.97
Fresh Round.....000kg		288	1,112	3.87	433	1,244	2.87
Fresh Dressed.....000kg		3,722	23,661	6.36	3,506	22,700	6.47
Frozen Round.....000kg		*	*	-	*	*	-
Frozen Dressed...000kg		25,426	186,329	7.33	31,089	261,923	8.42
Frozen Steaks....000kg		413	3,495	8.46	319	3,757	11.79
Salted.....000kg		452	5,366	11.87	889	13,424	15.11
Smoked.....000kg		1,173	21,436	18.28	936	19,266	20.59
Salmon Roe ⁴ 000kg		1,004	9,180	9.15	1,873	20,289	10.83
Portion Pack/ Specialty Products		-	-	-	136	1,957	14.37
Other ⁵		-	3,449	-	-	2,290	-
TOTAL		-	425,601	-	-	583,630	-

1 Note: Any discrepancies in VALUE(\$'000) figures are due to rounding.

2 Average Price:

Canned Salmon \$'s per 48-lb. case.

Other Salmon Products \$'s per kg.

Value divided by quantity may not equal average price due to rounding.

3 Note: The total value of "ALL SALMON" includes values for products including offal, oil, meal, etc. which could not be allocated to particular species. Also included are the value of items where less than three companies are reported. In a number of cases, however, confidential data is included if the total processed product represented by the confidential data is accounted for by three or more companies.

4 Includes roe not broken down by species.

5 Includes offal, offal meal, oil, heads, bait, milts, other products and the value of items where less than three companies reported.

* Confidential. Fewer than three companies reporting.

TABLE 12 - B.C. CANNED SALMON PRODUCTION BY REGION - 1988¹

AREA	(48 lb. Cases)					TOTAL
	CHINOOK	SOCKEYE	COHO	PINK	CHUM	
North Coast	796	56,424	5,658	241,603	50,632	355,231
South Coast & Fraser Area	2,296	150,291	18,057	492,726	164,954	828,826
TOTAL	3,092	206,715	23,715	734,329	215,586	1,184,057

¹Does not include imported salmon custom canned in B.C. for U.S. companies.

TABLE 13 - COMPARISON OF THE 1988 CANNED SALMON PACK TO THE 12 YEAR AVERAGE PACK

	1977 - 1988		Difference (%)
	1977 - 1988 Average (48 lb. cases)	1988 (48 lb. cases)	
Sockeye	426,467	206,715	-52
Coho	52,465	23,715	-55
Pink	660,088	734,329	+11
Chum	123,576	215,586	+74
Other	8,826	3,712	-58
TOTAL	1,271,422	1,184,057	-7

TABLE 14 - BRITISH COLUMBIA CANNED SALMON PRODUCTION : QUANTITY AND VALUE BY SPECIES - 1988¹

SPECIES	QUANTITY (48 lb. Cases)	WHOLESALE VALUE (\$'000)	AVG. PRICE \$/48 lb. Case ²	NET SELLING VALUE (\$'000)	AVG. PRICE \$/48 lb. Case ²
Red Chinook	1,099	181	164.34	170	154.44
Pink Chinook	1,733	250	144.61	238	137.51
White Chinook	260	34	130.50	33	128.58
Sockeye	206,715	69,098	334.27	66,522	321.81
Coho	23,715	5,007	211.14	4,773	201.27
Pink	734,329	132,801	180.85	124,182	169.11
Chum	215,586	29,323	136.02	27,793	128.92
Steelhead	620	86	139.51	81	130.62
TOTAL	1,184,057	236,780	-	223,792	-

¹ Fish processors were requested to report both a final wholesale value and a net selling value for their canned salmon production. The final wholesale value represents gross sales based upon company invoices. The net selling value refers to the final selling price after promotions, case allowances, cash discounts and other trade discounts which may apply.

² Value divided by quantity may not equal average price due to rounding.

TABLE 15 - BRITISH COLUMBIA CANNED SALMON PACK BY YEAR 1977- 1988

(48 lb. Case)

	<u>CHINOOK</u>	<u>SOCKEYE</u>	<u>COHO</u>	<u>PINK</u>	<u>CHUM</u>	<u>STEELHEAD</u>	<u>TOTAL</u>
1977	29,569	494,172	74,180	686,911	61,309	826	1,346,967
1978	8,916	485,748	53,960	456,058	121,487	707	1,126,876
1979	12,953	295,858	43,061	569,337	33,689	327	955,225
1980	7,599	368,844	88,217	472,462	176,884	420	1,114,426
1981	7,839	622,490	61,333	1,020,545	87,866	472	1,800,545
1982	7,661	548,998	47,246	140,415	74,127	384	818,831
1983	4,306	371,483	60,560	996,727	47,120	331	1,480,527
1984	2,709	230,798	25,832	338,474	68,579	276	666,668
1985	4,769	583,579	39,559	1,002,477	269,070	1,025	1,900,479
1986	6,417	599,320	82,375	900,782	264,282	599	1,853,775
1987	3,667	309,597	29,546	602,539	62,909	424	1,008,682
1988	3,092	206,715	23,715	734,329	215,586	620	1,184,057

TABLE 16 - AVERAGE WHOLESALE PRICE OF BRITISH COLUMBIA CANNED SALMON
BY YEAR 1977 - 1988

(\$/48 lb. Case)

<u>YEAR</u>	<u>CHINOOK</u>	<u>SOCKEYE</u>	<u>COHO</u>	<u>PINK</u>	<u>CHUM</u>	<u>STEELHEAD</u>
1977	87.86	113.61	104.00	75.82	71.49	81.11
1978	73.01	128.69	105.43	82.89	75.81	70.19
1979	82.25	159.06	132.16	103.53	93.12	93.49
1980	93.25	168.87	134.60	114.41	100.98	98.73
1981	105.01	175.17	145.55	107.87	96.34	104.22
1982	114.61	177.12	145.87	115.96	78.11	111.98
1983	103.02	178.46	136.61	97.04	93.83	112.52
1984	103.57	198.87	146.77	112.35	93.82	89.46
1985	105.87	201.61	150.18	111.38	84.69	94.39
1986	103.26	236.11	177.61	111.32	78.64	99.12
1987	102.74	266.34	176.66	128.05	100.29	126.64
1988	150.44	334.27	211.14	180.85	136.02	139.51

TABLE 17 - QUANTITY AND WHOLESALE VALUE OF BRITISH COLUMBIA DRESSED SALMON PRODUCTION BY SPECIES - 1988¹

SPECIES	FRESH DRESSED			FROZEN DRESSED			TOTAL		
	Head-On	Head-Off	000 kg	Head-On	Head-Off	000 kg	Fresh/Frozen Dressed	000 kg	\$/kg
Red Chinook	303	2,956	9.77	76	648	8.52	179	2,206	12.30
Pink Chinook	3	2	9.97	-	-	-	3	13	4.32
White Chinook	6	34	6.00	7	50	6.80	8	69	8.40
Sockeye	363	4,302	11.85	36	433	12.02	2,231	31,357	14.06
Coho	441	3,043	6.91	141	955	6.75	1,360	13,117	9.65
Pink	268	982	3.67	283	1,091	3.85	1,621	9,220	5.69
Silver Brite Chum	38	221	5.81	244	1,505	6.17	86	536	6.26
Semi Brite Chum	80	407	5.10	1,108	5,590	5.04	109	596	5.47
Dark Chum	7	28	4.13	95	398	4.17	3	10	3.02
Steelhead	8	40	5.12	2	15	6.22	43	325	7.57
TOTAL ²	1,514	12,015	-	1,992	10,685	-	5,643	57,449	-
								25,446	204,474
								34,595	284,623

¹ Excludes farm raised salmon.

² Excludes products that were reported by less than three companies.

³ Less than 500 kg and \$500.

* Confidential. Fewer than three companies reporting.

Note: Value divided by quantity may not equal average price due to rounding.

TABLE 18 - FROZEN DRESSED SALMON PRODUCTION IN B.C. BY YEAR 1977-1988¹

(Tonnes)

	<u>CHINOOK</u>	<u>SOCKEYE</u>	<u>COHO</u>	<u>PINK</u>	<u>CHUM</u>	<u>STEELHEAD</u>
1977	4,318	1,786	5,153	2,469	2,824	31
1978	4,478	5,224	4,974	406	8,370	41
1979	4,247	4,650	6,827	4,884	3,268	36
1980	3,745	817	4,388	1,299	8,572	33
1981	3,738	2,962	4,196	5,686	2,824	56
1982	4,013	9,757	5,425	413	8,643	86
1983	2,737	2,133	5,722	4,277	2,217	53
1984	3,985	3,574	7,219	1,746	5,523	149
1985	3,513	9,241	5,627	6,147	10,816	137
1986	3,020	9,079	6,852	1,624	11,420	157
1987	3,323	4,819	5,642	5,507	6,079	56
1988	3,996	3,852	4,410	4,457	14,287	87

TABLE 19 - AVERAGE WHOLESALE PRICE OF FROZEN DRESSED SALMON
BY YEAR 1977-1988¹

(\$/kg)

	<u>CHINOOK</u>	<u>SOCKEYE</u>	<u>COHO</u>	<u>PINK</u>	<u>CHUM</u>	<u>STEELHEAD</u>
1977	5.97	4.41	4.82	2.62	3.67	3.58
1978	6.06	6.50	6.48	3.51	4.53	4.74
1979	7.42	6.06	7.05	3.44	5.14	5.64
1980	7.61	5.71	6.15	3.44	5.07	5.71
1981	8.30	6.22	6.41	3.15	4.43	5.76
1982	8.33	5.36	6.17	3.15	3.97	4.89
1983	7.51	5.24	4.91	2.58	3.87	5.00
1984	9.31	7.19	7.12	3.20	4.30	5.81
1985	9.78	7.52	6.84	3.11	3.93	5.06
1986	7.87	8.63	6.68	3.13	3.77	4.77
1987	9.58	10.40	8.52	4.26	5.35	5.62
1988	12.26	14.27	10.63	5.52	6.01	6.93

¹ Includes both head-on and head-off products. See Table 17 for 1988 average prices of head-on and head-off products. Excludes farm raised salmon.

TABLE 20 - FRESH DRESSED SALMON PRODUCTION IN B.C. BY YEAR 1977-1988¹

(Tonnes)

	<u>CHINOOK</u>	<u>SOCKEYE</u>	<u>COHO</u>	<u>PINK</u>	<u>CHUM</u>	<u>STEELHEAD</u>
1977	752	187	444	244	404	6
1978	535	486	307	35	239	1
1979	530	130	370	363	31	1
1980	865	113	744	44	90	3
1981	485	128	357	144	71	2
1982	604	499	360	43	483	3
1983	853	602	557	685	260	1
1984	653	705	578	166	255	19
1985	363	718	513	803	273	9
1986	491	678	1,011	275	1,252	11
1987	496	494	974	728	1,026	3
1988	392	399	582	551	1,572	10

TABLE 21 - AVERAGE WHOLESALE PRICE OF FRESH DRESSED SALMON
BY YEAR 1977 - 1988

(\$/kg)

	<u>CHINOOK</u>	<u>SOCKEYE</u>	<u>COHO</u>	<u>PINK</u>	<u>CHUM</u>	<u>STEELHEAD</u>
1977	4.39	3.03	3.73	2.13	1.84	4.05
1978	5.31	5.86	5.23	2.34	4.54	3.73
1979	6.50	5.72	6.17	1.81	5.07	4.41
1980	5.43	4.62	5.14	2.93	3.35	4.23
1981	6.46	5.76	5.68	2.62	3.41	4.49
1982	6.92	4.99	4.78	2.73	3.62	3.97
1983	6.29	4.75	4.49	2.30	3.06	4.62
1984	8.03	6.08	6.24	2.40	3.96	5.87
1985	7.89	6.87	5.79	2.73	3.14	5.17
1986	6.46	8.11	5.74	2.74	2.72	5.85
1987	9.00	9.05	7.32	3.79	4.70	4.75
1988	9.42	11.87	6.87	3.76	5.18	5.38

1 Includes both head-on and head-off products. See Table 17 for 1988 average prices of head-on and head-off products. Excludes farm raised salmon.

TABLE 22 - QUANTITY AND WHOLESALE VALUE OF BRITISH COLUMBIA
HOT, COLD AND SPECIALTY SMOKED SALMON - 1988¹

SPECIES	HOT SMOKED			COLD SMOKED			SPECIALTY SMOKED			TOTAL		
	Tonnes	\$'000	Avg.\$/kg	Tonnes	\$'000	Avg.\$/kg	Tonnes	\$'000	Avg.\$/kg	Tonnes	\$'000	Avg.\$/kg
Chinook	9	118	12.91	155	3,259	21.02	2	15	8.08	166	3,392	20.43
Sockeye	*	*	10.29	385	10,000	25.96	31	340	11.10	416	10,340	24.86
Coho	7	72	10.70	44	947	21.56	*	*	6.61	51	1,019	19.98
Pink	4	61	13.80	29	561	19.04	*	*	5.11	33	622	18.85
Chum	42	466	10.98	213	3,226	15.13	6	85	15.23	261	3,777	14.47
Steelhead	-	-	-	6	96	15.89	-	-	-	6	96	15.89

TOTAL	62	717	-	832	18,089	-	39	440	-	933	19,246	-
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¹ Does not include smoked farmed salmon.

* Confidential. Fewer than three companies reporting.

Note: Value divided by quantity may not equal average price due to rounding.
Product totals do not include confidential data.

B) HERRING

In 1988, total herring landings decreased 16 percent from 37,809 tonnes to 31,601 tonnes. The total landed value also dropped by 10 percent over the same period, from \$107.4 million to \$96.5 million.

Specifically, roe herring landings dropped from 37,029 tonnes in 1987 to 30,070 tonnes, a decrease of 19 percent. The landed value also fell by 11 percent from \$106.8 million to \$95.1 million. Food and bait herring landings showed a significant increase in 1988, from 780 to 1,531 tonnes, a 96 percent increase. This large increase in landings appears to be the result of increased participation in the winter food and bait herring fishery. The landed value for food and bait also rose dramatically from \$528 thousand to \$1.3 million, an increase of 154 percent.

The total wholesale value of herring production in 1988 was \$175.5 million. Despite a drop in the total landed quantity and value, the total wholesale value was virtually unchanged from the previous year. The wholesale value of herring roe production was \$171.9 million, up only slightly from 1987. The average wholesale price of roe rose from \$26.79/kg to \$33.93/kg, an increase of 27 percent. Combined roe herring production, including herring meal, oil and spawn on kelp, accounted for about 97 percent of the total wholesale value of herring production for the fifth consecutive year. The wholesale value of herring frozen for food was \$178 thousand while bait was valued at \$2.2 million. Frozen food and bait herring in 1988 accounted for about 2 percent, as it has for the past six years. The value of other herring products, including fresh, kippered snacks, dry-salted, and pickled, totalled \$1.4 million or 1 percent of the total.

TABLE 23 - ROE HERRING LANDINGS AND WHOLESALE VALUE OF
ROE HERRING PRODUCTS 1977 - 1988

WHOLESALE VALUE						
	LANDINGS ¹ (Tonnes)	LANDED VALUE ¹ (\$'000)	ROE (\$'000)	SPAWN ON KELP (\$'000)	FROZEN FOR ROE (\$'000)	TOTAL WHOLESALE VALUE ⁴ (\$'000)
1977	73,485	29,542	73,292	1,407	1,405	79,799
1978	63,408	52,933	130,743	2,521	3,979	141,508
1979	37,480	126,866	182,304	5,011	5,163	195,387
1980	16,414	26,357	33,074	2,448	1,058	38,297
1981	29,486	35,928	69,946	3,308	- ³	74,198
1982	27,658	35,479	76,963	3,900	-	83,057
1983	39,155	52,902	98,094	6,455	-	107,946
1984	32,795	43,645	88,090	4,508	- ³	96,058
1985	24,588	62,050	91,792	5,699	-	100,115
1986	15,732	45,610	77,474	6,372	-	85,454
1987	37,029	106,824	155,074	10,444	-	170,132
1988	30,070	95,117	155,158	12,934	-	171,860

- 1 Includes spawn on kelp (1977 - 1988).
- 2 Includes spawn off nets.
- 3 Confidential - fewer than three companies reporting. Included in the total wholesale value.
- 4 Includes roe herring by-products.

TABLE 24 - FOOD AND BAIT HERRING LANDINGS AND WHOLESALE VALUE
OF FOOD AND BAIT HERRING PRODUCTS 1977 - 1988

WHOLESALE VALUE					
	LANDINGS	LANDED	FROZEN		TOTAL
	(Tonnes)	VALUE	FOR FOOD	BAIT	VALUE ¹
		(\$'000)	(\$'000)	(\$'000)	(\$'000)
1977	23,805	4,156	8,353	449	10,265
1978	18,145	4,194	9,484	1,420	13,523
1979	6,181	2,131	3,204	2,133	6,546
1980	8,909	2,891	7,207	1,597	9,919
1981	8,663	2,177	5,516	1,480	8,253
1982	1,117	450	1,010	1,463	3,391
1983	892	491	418	1,838	3,104
1984	1,080	720	125	1,920	2,898
1985	1,367	1,055	68	2,012	3,017
1986	759	599	256	1,494	2,833
1987	780	528	545	1,945	3,518
1988	1,531	1,340	178	2,212	3,676

- 1 Includes other food and bait herring products.

C) HALIBUT

The total halibut catch by British Columbia fishermen was 5,866 tonnes, valued at \$23.2 million. The catch originating in Canadian waters and delivered to British Columbia ports increased by 6 percent in 1988 from 4,751 tonnes to 5,048 tonnes. In addition to these landings, 818 tonnes of halibut valued at \$3,513,439 was caught in Canadian waters and delivered by Canadian fishermen to U.S. ports. This compares to 693 tonnes, worth approximately \$4.0 million, delivered to U.S. ports in the preceding year. The landed value of the catch delivered to British Columbia ports dropped, from \$24.3 to \$19.7 million, a decrease of 19 percent. This substantial decrease in landed value reflects the drop in landed prices. After three consecutive years of significant price increases, 1988 showed a dramatic return to lower prices.

The total wholesale value of halibut processed in British Columbia was \$26.8 million in 1988, 21 percent below the 1987 value. Including halibut landed by B.C. fishermen and delivered to U.S. ports, the total 1988 wholesale value was down 20 percent from \$37.9 million in 1987 to \$30.3 million. Frozen dressed halibut was still a major product marketed with a wholesale value of \$12.8 million, accounting for 48 percent of the total wholesale value of halibut. However, fresh dressed halibut, with a value of \$11.9 million, increased its value share of halibut production from 41 percent to 45 percent. Halibut fillets, steaks and "other" products were also processed.

TABLE 25 - LANDINGS AND WHOLESALE VALUE OF HALIBUT IN B.C.¹

1977 - 1988

	TOTAL LANDINGS (Tonnes)	LANDED VALUE (\$'000)	AVG. LANDED PRICE (\$/kg)	WHOLESALE VALUE (\$'000)
1977	2,818	8,278	2.94	9,756
1978	2,294	10,001	4.36	12,827
1979	2,410	14,004	5.81	17,692
1980	2,668	7,341	2.75	9,962
1981	2,233	6,592	2.95	10,548
1982	1,690	4,715	2.79	5,488
1983	1,865	6,381	3.42	9,268
1984	3,110	7,222	2.32	11,640
1985	3,687	10,704	2.90	15,723
1986	4,201	18,765	4.47	25,521
1987	4,751	24,310	5.12	33,881
1988	5,048	19,703	3.90	26,766

1 Not including Canadian landings of halibut in Alaska and Washington.

2 Includes the value of specialty items such as fish and chips, portions, fish sticks, etc.

D) GROUND FISH

Domestic groundfish landings were down 5 percent in 1988, from 69,188 tonnes to 65,562 tonnes. The landed value increased very slightly from \$51.1 million to \$51.7 million. The landed values of many species of groundfish showed significant decreases, most notable were hake, turbot and pollock. Species exhibiting increases in landed value were dogfish, sablefish, soles and most significantly, flounder and other groundfish. Included in "other groundfish" are idiotfish, shark and some non-food fish.

The total wholesale value of groundfish production decreased by 9 percent in 1988, dropping from \$94.9⁴ million to \$85.9 million. The wholesale values of most species of groundfish decreased, with the exception of sole, flounder, sablefish and dogfish. The most notable drops were in pollock, turbot, hake and other groundfish. Soles and dogfish displayed large increases in wholesale value, rising from \$5.8 million in 1987 to \$9.4 million and from \$2.5 million to \$4.0 million respectively. Both species increasing by 64 percent. The wholesale value of sablefish rose again from \$17.0 million in 1987 to \$20.6 million, an increase of 21 percent. Rockfish remained relatively constant in value and accounted for 34 percent of the total groundfish wholesale value. It should be noted that a small amount of processed product was derived from imported groundfish.

TABLE 26 - COMPARATIVE WHOLESALE VALUES OF MAJOR GROUND FISH SPECIES

<u>SPECIES</u>	<u>1986 - 1988</u>		
	<u>1986</u> (\$'000)	<u>1987</u> (\$'000)	<u>1988</u> (\$'000)
Sole	5,834	5,752	9,418
Rockfish ¹	27,957	28,910 ⁴	28,836
Pacific Cod	5,539	17,284	10,974
Ling Cod	7,205	7,569	4,957
Sablefish	14,140	16,953	20,566
Flounder	131	90	121
Skate	217	399	230
Pollock	2,919	3,974 ⁴	1,060
Turbot	1,358	1,358	260
Hake ²	869	2,247 ⁴	983
Dogfish	1,327	2,464	4,041
Other Groundfish ³	3,909	7,864	4,406
 TOTAL	 71,405	 94,864 ⁴	 85,852

- 1 Includes Pacific ocean perch, red snapper and other rockfish.
- 2 Excludes over-the-side sales to foreign vessels in co-operative fishing arrangements.
- 3 Includes other groundfish, portions, sticks and specialties, and groundfish meal and oil.
- 4 Revised data.

TABLE 27 - JOINT-VENTURE OR COOPERATIVE SALES OF PACIFIC HAKE TO FOREIGN NATIONS BY YEAR¹

1978 - 1988

	<u>POLAND</u>		<u>SOVIET UNION</u>		<u>GREECE</u>		<u>KOREA</u>		<u>JAPAN</u>		<u>TOTAL</u>	
	<u>Tonnes</u>	<u>\$'000</u>	<u>Tonnes</u>	<u>\$'000</u>	<u>Tonnes</u>	<u>\$'000</u>	<u>Tonnes</u>	<u>\$'000</u>	<u>Tonnes</u>	<u>\$'000</u>	<u>Tonnes</u>	<u>\$'000</u>
1978	1,814	240	-	-	-	-	-	-	-	-	1,814	240
1979	3,102	445	1,131	162	-	-	-	-	-	-	4,233	607
1980	4,560	739	4,300	614	3,355	609	-	-	-	-	12,215	1,962
1981	4,998	826	7,232	1,190	4,929	894	-	-	-	-	17,159	2,910
1982	10,279	1,714	9,397	1,550	-	-	-	-	-	-	19,676	3,264
1983	13,465	2,270	14,192	2,363	-	-	-	-	-	-	27,657	4,633
1984	9,214	1,609	19,692	3,044	-	-	-	-	-	-	28,906	4,653
1985	13,306	2,248	-	-	-	-	-	-	-	-	13,306	2,248
1986	13,494	1,962	16,642	2,417	-	-	-	-	-	-	30,136	4,379
1987	26,514	4,260	18,231	2,930	-	-	2,856	459	-	-	47,601	7,649
1988	26,673	4,358	22,253	3,458	-	-	-	-	1,048	174	49,974	7,990

¹ Does not include domestic hake catch or national allocations to the Soviet Union, Poland and Japan.

British Columbia domestic hake landings do not include cooperative fishing arrangements with foreign nations. In 1988, 49,974 tonnes worth approximately \$8.0 million were purchased by the Soviet Union, Poland and Japan from Canadian fishermen. In 1988, Japan began its first year of participation in these ventures.

E) SHELLFISH

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Shellfish landings decreased very slightly from 23,185 tonnes in 1987 to 23,116 tonnes. The only shellfish species to show dramatic changes in reported landings in 1988 were geoducks, octopus and other shellfish. The total landed value was up from \$35.3 million to \$41.4 million, an increase of 17 percent. The landed values for all species, except crabs, rose despite some species showing a drop in landed weight. Most notable, geoduck, despite a decrease in harvest, rose by 59 percent in landed value over 1987.

The total wholesale value of shellfish production increased by 29 percent from \$56.0 million to \$72.2 million in 1988. Most species showed some increase in wholesale value in 1988. Clams, including geoducks, accounted for 40 percent of the total wholesale value of shellfish, crab 13 percent, shrimp and prawns 17 percent, sea urchins 19 percent and oysters 5 percent. Abalone, mussels, octopus, scallops, sea cucumbers, squid and gooseneck barnacles accounted for the remaining 6 percent. Octopus products demonstrated a tremendous increase with a two-fold rise over 1987. Sea urchin products again showed an increase but a significant portion of this originated from outside B.C. waters.

TABLE 28 - COMPARATIVE WHOLESALE VALUES OF MAJOR SHELLFISH SPECIES

<u>1986 - 1988</u>			
<u>SPECIES</u>	<u>1986</u> <u>(\$'000)</u>	<u>1987</u> <u>(\$'000)</u>	<u>1988</u> <u>(\$'000)</u>
Abalone	690	873	1,059
Clams ¹	7,425	10,243	12,748
Geoducks	7,088	12,265	16,066
Crabs	6,082	9,025 ³	9,196
Octopus	66	275	561
Oysters	3,254	3,713	3,982
Shrimp	2,679	6,977	6,269
Prawns	2,979	4,551	5,769
Squid	637 ²	801 ²	120 ²
Mussels	5	80	15
Scallops	159	239	289
Sea Cucumbers	461	1,490	1,994 ⁶
Sea Urchins	3,344	4,929 ⁴	13,467 ⁴
Gooseneck Barnacles	-	-	664
Other	18	538 ⁵	-
TOTAL	34,887	55,999	72,199

1 Includes horse clams.

2 Includes products derived from squid originating outside of B.C. waters.

3 Includes products derived from imported crabs.

4 Includes product derived from imported sea urchins.

5 Includes gooseneck barnacles and other shellfish n.e.s.

6 Includes product derived from imported sea cucumbers.

F) AQUACULTURE PRODUCTION

SUMMARY OF THE B.C. AQUACULTURE INDUSTRY

The mid 1980's was the beginning of a boom period for the salmon farming industry on the British Columbia coast. By the end of 1988 there were 207 salmon farms approved for operation in B.C., a 75 percent increase from 1987. But only approximately 140 farms were in actual operation during 1988. Forty percent of these farms were concentrated in the Sunshine Coast area, although the trend is for a larger concentration of farms in the North Georgia Strait area. Production in 1988 was 6,590 tonnes, with a reported value of \$39 million to the producer. This is approximately a three-fold increase in the quantity and value of production from 1987. It should be noted that quantities for 1987 and 1988 are reported in estimated round weight equivalents.

In 1988, the shellfish industry was comprised of 418 active tenures utilizing 1,710 hectares of foreshore. These figures represent an increase of 6 per cent over 1987 in leased area and a 9 per cent increase in numbers of growers. The majority of these farms utilize off-bottom culture technology. This trend is likely to continue and expand as suitable intertidal ground is very limited. Oyster farms, which comprise the majority of shellfish aquaculture operations, are currently distributed along the east and west coast of Vancouver Island and the Sunshine Coast, with the greatest production achieved in the Baynes Sound area of Vancouver Island.

Pacific oyster production amounted to 3,702 tonnes in 1988, with a reported value to the producers of \$2.7 million. This is a 6 percent increase in production from 1987 and a 7 percent increase in value. The expanding clam industry reported 30 tonnes of production in 1988 valued at \$59 thousand to the producer which represents a 20 percent increase in tonnage and a 37 percent increase in value. Mussel production dropped considerably in 1988, indicating that more research is required in British Columbia to make this a viable industry.

The trout farming sector consisted of 162 commercial trout farmers in 1988. Rainbow trout production for market was 113 tonnes, with a reported value of \$505 thousand. This is a 26 percent increase in production and a 14 percent increase in value from 1987. Only 44 percent of all farmers produced product for the table market, the remaining 56 percent sold live fish to other farmers for grow-out, operated U-catch-em ponds, or reported no production at all. Most freshwater trout farms are located on private land and are not subject to the same land tenure process and requirements as are fish farms located on Crown land.

TABLE 29 - AQUACULTURE PRODUCTION IN BRITISH COLUMBIA - 1982-1988

SPECIES	1982	1983	1984	1985	1986	1987	1988
MARINE PEN REARED SALMONIDS							
Tonnes	273	128	107	120	400	1,931 ¹	6,590
\$'000	1,136	708	702	820	2,728	12,872 ¹	39,084
TROUT							
Tonnes	74	77	71	83	101	90 ¹	113
\$'000	n/a	441	433	435	569	442 ¹	505
CARP							
Tonnes	n/a	14	11	9	*	4 ¹	10
\$'000	n/a	n/a	n/a	23	*	14 ¹	20
OYSTERS							
Tonnes	1,579	2,453	2,897	3,420	2,864	3,432	3,702
\$'000	981	1,554	2,109	2,163	2,515	2,548	2,725
MUSSELS							
Tonnes	-	-	-	n/a	6	14	*
\$'000	-	-	-	4	16	36	*
CLAMS							
Tonnes	-	-	-	4	7	25	30
\$'000	-	-	-	4	14	43	59
SCALLOPS							
Tonnes	-	-	-	-	-	*	*
\$'000	-	-	-	-	-	*	*
ABALONE (experimental)							
Tonnes	-	-	-	n/a	n/a	n/a	n/a
\$'000	-	-	-	n/a	n/a	n/a	n/a
MARINE PLANTS							
Tonnes	n/a	n/a	*	*	*	*	*
\$'000	n/a	n/a	*	*	*	*	*

* Confidential. Fewer than three companies reporting.

¹ Revised data.

1. SALMON

In 1988, 65 companies reported production totalling 6,590 tonnes worth \$39.1 million. This represents approximately a three-fold increase in quantity and value from 1987. Production is expected to continue to grow significantly in the future as more farms begin to market their fish.

In 1988, the third year in which marine-reared rainbow trout were marketed, a total of 185 tonnes of fish were produced with a value of \$917 thousand. This is the first year in which marine pen-reared Atlantic salmon production has been reported with 80 tonnes worth \$592 thousand. In previous years, production was confidential.

Salmon farmers targetted about 73 percent of their product to the fresh market, a drop from 1987. In 1988, there was a greater diversification of product types with a greater amount being processed frozen and smoked. The total wholesale product value of all farmed salmon products was 9 percent above the farm value.

TABLE 30 - BRITISH COLUMBIA SALMONID MARICULTURE PRODUCTION - 1979 - 1988¹

	COHO			CHINOOK			STEELHEAD/ RAINBOW TROUT			ATLANTIC			TOTAL PRODUCTION		
	Quantity (Tonnes)	Value (\$'000)	Quantity (Tonnes)	Quantity (Tonnes)	Value (\$'000)	Quantity (Tonnes)	Quantity (Tonnes)	Value (\$'000)	Quantity (Tonnes)	Quantity (Tonnes)	Value (\$'000)	Quantity (Tonnes)	Quantity (Tonnes)	Value (\$'000)	Quantity (Tonnes)
1979	41	157	-	-	-	-	-	-	-	-	-	41	41	157	
1980	157	898	-	-	-	-	-	-	-	-	-	157	157	898	
1981	176	985	-	-	-	-	-	-	-	-	-	176	176	985	
1982	230	908	43	228	-	-	-	-	-	-	-	273	273	1,136	
1983	73	350	55	358	-	-	-	-	-	-	-	128	128	708	
1984	642	306	43	396	-	-	-	-	-	-	-	107	107	702	
1985	662	395	54	425	-	-	-	-	-	-	-	120	120	820	
1986	304	2,014	87	642	93	72	-	-	-	-	-	400	400	2,728	
1987 ⁴	790	4,990	949	7,018	1923	864	-	-	-	-	-	1,931	1,931	12,872	
1988 ⁵	2,775	14,035	3,550	23,540	185	917	80	592	6,590	39,084					

¹ Source: British Columbia Annual Fisheries Production Statistics and British Columbia Commercial Fish Farm Statistics.

² Includes an unspecified amount of marine pen-reared rainbow trout.

³ Includes an unspecified amount of "other" species.

⁴ Revised data, and quantities are reported in round weight.

⁵ Quantities are reported in round weight.

TABLE 31 - PRODUCTION AND UTILIZATION OF MARINE PEN-REARED (FARMED) SALMON
BY SPECIES - 1988

SPECIES	FRESH DRESSED			FROZEN DRESSED			FROZEN STEAKS AND FILLETS			HOT and COLD SMOKED			TOTAL
	Head-On/Head-Off			Head-On/Head Off									
	000kg	\$'000	\$/kg	000kg	\$'000	\$/kg	000kg	\$'000	\$/kg	000kg	\$'000	\$/kg	
Chinook	2,268	19,135	8.44	446	3,073	6.88	44	445	10.05	60	1,397	23.35	000kg \$'000
Coho	1,422	10,277	7.23	757	5,173	6.83	33	386	11.71	19	453	24.22	2,818 24,050
Steelhead	116	747	6.42	63	332	5.28	-	-	-	*	*	-	2,231 16,289
Atlantic	69	595	8.68	-	-	-	*	*	-	-	-	-	179 1,079
													69 595

TOTAL	3,875	30,754	-	1,266	8,578	-	77	831	-	79	1,850	-	5,297 42,013 ¹
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* Confidential, less than 3 companies reporting.

¹ Excludes a small amount of "other" farmed salmon products, fresh dressed freshwater trout and confidential items with a combined wholesale value of \$766 thousand.

2. OYSTERS

Shellfish aquaculture in British Columbia is primarily based on the Pacific oyster. In 1988, total production for this species was 3,702 tonnes, an increase of 6 percent from 3,482 tonnes in 1987. This increase likely reflects the effect of remote larvae-setting operations and their ability to supply increasing demand.

The use of hatchery produced eyed larvae for seed production has now almost completely replaced the collection of wild seed. The majority of eyed larvae continue to be imported from the United States.

The landed value which shows a 7 percent increase over the past year, primarily reflects a moderate increase in the "farm gate" selling price and the increased percentage of half-shell products. The total wholesale value of all oyster products showed a modest 12 percent increase over 1987, from \$3.7 million to \$4.0 million.

The major growth area in oyster culture continues to be half-shell production. Significant increases in 1988 pushed sales to over 439,000 dozen from 385,000 dozen in 1987. This growth is likely to continue in the near future as many new growers come on stream or established growers continue to expand.

TABLE 32 - BRITISH COLUMBIA OYSTER PRODUCTION - 1975 - 1988

	<u>Production^{1,2}</u> <u>(Tonnes)</u>	<u>Landed Value</u> <u>(\$'000)</u>
1975	3,246	883
1976	3,245	887
1977	2,998	981
1978	2,793	1,021
1979	2,231	893
1980	1,922	1,134
1981	1,415	1,030
1982	1,579	981
1983	2,453	1,554
1984	2,897	2,109
1985	3,420	2,613
1986	2,864	2,515
1987	3,482	2,548 ³
1988	3,702	2,725

-
- 1 1975-1980 production data was provided by the Department of Fisheries Oceans and 1981 - 1988 data was provided by the Aquaculture Operations Unit, Ministry of Agriculture and Fisheries.
 - 2 Includes a small amount of wild oyster harvest from picking permits, after 1980.
 - 3 The landed value is relatively lower than previous years as it more accurately reflects a "farm gate" selling price.

3. FRESHWATER TROUT

The trout aquaculture industry reported a total of 113 tonnes of market sales in 1988, representing a 26 percent increase from 1987. The total value of these sales increased by 14 percent from \$442 thousand to \$505 thousand.

The majority of trout was marketed as a fresh dressed head-on product accounting for about 95 percent of the production. The remainder was either sold live or as frozen product, both head-on and head-off.

There were 162 freshwater commercial licence-holders in 1988, however, 90 reported no sales whatsoever. Only 44 percent of the licence-holders reported any market sales, and much of that was concentrated among five farmers who reported 75 percent of the production.

TABLE 33 BRITISH COLUMBIA FRESHWATER TROUT FARM PRODUCTION - 1979 - 1988

	Production ¹ (Tonnes)	Value (\$'000)
1979	53	n/a
1980	56	n/a
1981	71	n/a
1982	74	n/a
1983	77	441
1984	71	433
1985	83	435
1986	101	569
1987 ²	90	442
1988	113	505

1 Food Market Sales 1979 - 1985 data was provided by the Ministry of Environment and Parks, Fisheries Branch, in "B.C. Commercial Fish Farm Statistics".

2 Revised data.

G) MAJOR SPECIES BY PRODUCT TYPE

The following table "Landings and Products Processed in B.C. - 1988¹" is one of the cornerstones of the Fisheries Production Statistics of British Columbia. For each species, a summary of catch and landed value data is provided, along with data on the final quantity, wholesale value and average wholesale price for each product type. Virtually all tables throughout the report utilize data from this table.

TABLE 34 - LANDINGS AND PRODUCTS PROCESSED IN B.C. - 1988¹

<u>SPECIES</u>	<u>QUANTITY</u> <u>(Tonnes)</u>	<u>VALUE</u> <u>(\$'000)</u>	<u>AVG. PRICE</u> ² <u>(\$/KG)</u>
<u>ABALONE</u>			
Landed	49	1,096	22.37
Processed:			
In Shell, Fresh or Frozen	47	1,059	22.41
Total Wholesale Value	-	1,059	-
<u>CLAMS</u>			
Butter Clams Landed ³	-	-	-
Processed:			
Fresh or Frozen	9	22	2.52
Meat, Fresh or Frozen	46	179	3.85
Other Butter Clam Products ⁴	-	5	-
Total Wholesale Value	-	206	-
Geoduck Clams Landed	4,567	9,807	2.15
Processed:			
Live	796	3,264	4.10
Neck Meat	854	11,715	13.72
Body Meat	386	1,034	2.68
Other	-	53	-
Total Wholesale Value	-	16,066	-
Littleneck Clams Landed ³	-	-	-
Processed:			
Fresh or Frozen	4,108	11,069	2.69
Total Wholesale Value	-	11,069	-
Other Clams Landed ⁵	4,841	8,068	1.67
Processed:			
Fresh or Frozen	215	549	2.56
Other ⁶	-	924	-
Total Wholesale Value	-	1,473	-
<u>CRABS</u>			
Landed	1,532	6,068	3.96
Processed:			
In Shell, Fresh	1,183	6,618	5.60
In Shell, Frozen	88	568	6.42
Meat, Fresh	47	1,020	21.69
Meat, Frozen	9	198	21.37
Cooked	114	792	6.96
Total Wholesale Value	-	9,196	-

TABLE 34 - CONT'D

<u>SPECIES</u>	<u>QUANTITY</u> <u>(Tonnes)</u>	<u>VALUE</u> <u>(\$'000)</u>	<u>AVG. PRICE²</u> <u>(\$/KG)</u>
<u>DOGFISH</u>			
Landed	5,314	2,182	0.41
Processed:			
Fresh Round	1,857	794	0.43
Frozen	1,169	1,808	1.55
Flaps	98	416	4.24
Backs	410	798	1.95
Fins & Tails	46	146	3.13
Other ⁷	-	79	-
Total Wholesale Value	-	4,041	-
<u>EULACHONS</u>			
Landed	40	37	0.93
Processed:			
Fresh	31	39	1.24
Other ⁸	-	18	-
Total Wholesale Value	-	57	-
<u>FLOUNDER</u>			
Landed	142	62	0.44
Processed:			
Fresh Round	19	10	0.51
Fillets, Fresh	25	99	3.98
Other ⁹	-	12	-
Total Wholesale Value	-	121	-
<u>GOOSENECK BARNACLES</u>			
Landed	48	479	9.98
Processed:			
Fresh	45	664	14.89
Total Wholesale Value	-	664	-
<u>GREY/PACIFIC COD</u>			
Landed	11,024	5,766	0.52
Processed:			
Fresh Round	938	751	0.80
Fresh Dressed	15	23	1.53
Frozen Dressed	118	195	1.65
Fillets, Fresh	2,202	7,613	3.46
Fillets, Frozen	364	1,124	3.09
Other ¹⁰	-	1,268	-
Total Wholesale Value	-	10,974	-
<u>HAKE</u>			
Landed (B.C. Ports)	6,361	919	0.14
Processed:			
Fresh Round	6,259	900	0.14
Other ¹¹	-	83	-
Total Wholesale Value	-	983	-

TABLE 34 - CONT'D

SPECIES	QUANTITY (Tonnes)	VALUE (\$'000)	AVG. PRICE ² (\$/KG)
<u>HALIBUT</u>			
Landed (B.C. Ports)	5,048	19,703	3.90
Processed: ¹²			
Fresh Dressed	2,411	11,930	4.95
Frozen Dressed	2,394	12,782	5.34
Fillets, Fresh or Frozen	66	498	7.49
Steaks, Frozen	74	630	8.46
Other ¹³	-	926	-
Total Wholesale Value	-	26,766	-
<u>HERRING</u>			
Landed ¹⁴	31,601	96,457	3.05
Processed:			
Bait, Fresh or Frozen	1,178	2,212	1.88
Frozen for Food	124	178	1.44
Body and Offal Oil	795	322	0.40
Body and Offal Meal	4,246	3,303	0.78
Roe ¹⁵	4,573	155,158	33.93
Spawn on Kelp	218	12,934	59.34
Other ¹⁶	-	1,429	-
Total Wholesale Value	-	175,536	-
<u>LING COD</u>			
Landed	3,444	2,622	0.76
Processed:			
Fresh Round	404	333	0.82
Fresh Dressed	418	867	2.08
Frozen Dressed	201	419	2.09
Fillets, Fresh	495	1,743	3.52
Fillets, Frozen	296	1,282	4.33
Other ¹⁷	-	313	-
Total Wholesale Value	-	4,957	-
<u>MUSSELS</u>			
Landed	3	4	1.33
Processed:			
In shell, Fresh or Frozen	5	15	3.12
Other	-	*44	-
Total Wholesale Value	-	15	-
<u>OCTOPUS</u>			
Landed	209	651	3.11
Processed:			
Fresh	55	190	3.46
Frozen	28	118	4.17
Bait	67	253	3.79
Total Wholesale Value	-	561	-

TABLE 34 - CONT'D

<u>SPECIES</u>	<u>QUANTITY</u> <u>(Tonnes)</u>	<u>VALUE</u> <u>(\$'000)</u>	<u>AVG. PRICE²</u> <u>(\$/KG)</u>
<u>OYSTERS</u>			
Landed	3,702	2,725	0.74
Processed:			
Half Shell(dozens)	439,495	1,434	3.26
Meat, Fresh, 8 oz.	37	349	9.33
Meat, Fresh, 16 oz.	6	52	8.58
Meat, Fresh, 32 oz.	257	2,058	8.00
Other ¹⁸	-	89	-
Total Wholesale Value	-	3,982	-
<u>PACIFIC OCEAN PERCH</u>			
Landed	6,787	3,535	0.52
Processed:			
Fresh Round	1,078	862	0.80
Frozen Dressed	90	205	2.27
Fillets, Fresh	540	1,862	3.45
Fillets, Frozen	241	868	3.61
Other ¹⁹	-	396	-
Total Wholesale Value	-	4,193	-
<u>POLLOCK</u>			
Landed	460	89	0.19
Processed:			
Fresh Round	512	92	0.18
Fillets, Fresh	12	33	2.73
Fillets, Frozen	24	69	2.94
Other ²⁰	-	866	-
Total Wholesale Value	-	1,060	-
<u>PRAWNS</u>			
Landed	719	5,873	8.17
Processed:			
Fresh	332	3,084	9.30
Frozen	175	1,900	10.86
Tails, Frozen, Cooked	41	717	17.68
Whole, Frozen, Cooked	7	68	10.08
Total Wholesale Value	-	5,769	-
<u>RED SNAPPER</u>			
Landed ²¹	-	-	-
Processed:			
Fresh Round	687	2,155	3.14
Fresh Dressed	20	34	1.72
Frozen Dressed	119	273	2.30
Fillets, Fresh	1,173	4,153	3.54
Fillets, Frozen	90	263	2.91
Other ²²	-	86	-
Total Wholesale value	-	6,964	-

TABLE 34 - CONT'D

<u>SPECIES</u>	<u>QUANTITY</u> <u>(Tonnes)</u>	<u>VALUE</u> <u>(\$'000)</u>	<u>AVG. PRICE²</u> <u>(\$/KG)</u>
<u>ROCKFISH</u>			
Landed	20,016	13,524	0.68
Processed:			
Fresh Round	3,614	5,749	1.59
Fresh Dressed	67	86	1.28
Frozen Dressed	189	378	2.00
Fillets, Fresh	2,774	9,612	3.46
Fillets, Frozen	534	1,476	2.76
Other ²³	-	378	-
Total Wholesale Value	-	17,679	-
<u>SABLEFISH</u>			
Landed	5,291	18,444	3.49
Processed:			
Fresh Round	61	137	2.26
Fresh Dressed	104	445	4.27
Frozen Dressed, Japanese Cut	3,104	18,661	6.01
Frozen Dressed, Western Cut	181	905	4.99
Fresh and Frozen Fillets	5	14	2.59
Smoked, Dressed	25	217	8.72
Smoked Fillets	22	187	8.63
Total Wholesale Value	-	20,566	-
<u>SALMON</u>			
Landed ²⁴	84,830	312,087	3.68
Processed: ²⁵			
Fresh Round	433	1,244	2.87
Fresh Dressed	3,506	22,700	6.47
Frozen Dressed	31,089	261,923	8.42
Frozen Fillets & Steaks	319	3,757	11.79
Salted	889	13,424	15.11
Smoked	936	19,266	20.59
Canned ²⁶ (48 lb. cases)	1,184,057	236,780	199.97
Roe ²⁷	1,873	20,289	10.83
Portion Pack/Specialty Products	136	1,957	14.37
Offal Meal	1,046	827	0.79
Other ²⁸	-	1,463	-
Total Wholesale Value	-	583,630	-
<u>MARINE PEN-REARED (FARMED) SALMON</u>			
Landed	6,590	39,084	5.93
Processed:			
Fresh Dressed ²⁹	3,887	30,813	7.93
Frozen Dressed	1,266	8,578	6.77
Fillets	77	837	10.76
Smoked	79	1,856	23.53
Other ³⁰	-	695	-
Total Wholesale Value	-	42,779	-

TABLE 34 - CONT'D

<u>SPECIES</u>	<u>QUANTITY</u> <u>(Tonnes)</u>	<u>VALUE</u> <u>(\$'000)</u>	<u>AVG. PRICE²</u> <u>(\$/KG)</u>
<u>SCALLOPS</u>			
Landed	67	289	4.31
Processed:			
In Shell, Fresh or Frozen	56	289	5.17
Other	-	*44	-
Total Wholesale Value	-	289	-
<u>SEA CUCUMBERS</u>			
Landed	1,921	984	0.51
Processed: ³¹			
Meat	217	1,768	8.15
Other ³²	-	226	-
Total Wholesale Value	-	1,994	-
<u>SEA URCHINS</u>			
Landed	2,559	1,822	0.71
Processed: ³³			
Whole, Fresh or Chilled	306	938	3.07
Roe in trays	412	11,662	28.30
Other ³⁴	-	867	-
Total Wholesale Value	-	13,467	-
<u>SHRIMP</u>			
Landed	2,561	3,248	1.27
Processed:			
Fresh	587	1,126	1.92
Frozen	391	790	2.02
Shrimp Meat, Fresh	250	3,471	13.89
Shrimp Meat, Frozen	86	808	9.44
Other ³⁵	-	74	-
Total Wholesale Value	-	6,269	-
<u>SKATE</u>			
Landed	588	92	0.16
Processed:			
Fresh	2	*44	0.17
Wings	123	212	1.73
Other ³⁶	-	18	-
Total Wholesale Value	-	230	-
<u>SMELT</u>			
Landed	1	3	3.00
Processed:			
Fresh or Frozen	2	5	2.20
Total Wholesale Value	-	5	-

TABLE 34 - CONT'D

<u>SPECIES</u>	<u>QUANTITY</u> <u>(Tonnes)</u>	<u>VALUE</u> <u>(\$'000)</u>	<u>AVG. PRICE²</u> <u>(\$/KG)</u>
<u>SOLE</u>			
Dover Sole Landed ³⁷	-	-	-
Processed:			
Fresh Round	77	77	1.00
Fillets, Fresh	253	1,663	6.58
Fillets, Frozen	47	285	6.02
Other ³⁸	-	504	-
Total Wholesale Value	-	2,529	-
English Sole Landed ³⁷	-	-	-
Processed:			
Fresh Round	41	41	0.99
Fillets, Fresh	70	378	5.57
Fillets, Frozen	10	47	4.53
Other ³⁹	-	9	-
Total Wholesale Value	-	475	-
Petrale Sole Landed ³⁷	-	-	-
Processed:			
Fresh Round	67	151	2.24
Frozen Round	59	119	2.03
Fillets, Fresh	88	769	8.75
Fillets, Frozen	29	290	10.10
Other ⁴⁰	-	85	-
Total Wholesale Value	-	1,414	-
Rock Sole Landed ³⁷	-	-	-
Processed:			
Fresh Round	246	249	1.01
Fillets, Fresh	170	988	5.80
Fillets, Frozen	56	219	3.90
Other ⁴¹	-	12	-
Total Wholesale Value	-	1,468	-
Other Sole Landed	5,138	4,079	0.79
Processed:			
Fresh Round	32	45	1.39
Fillets, Fresh	320	1,875	5.87
Fillets, Frozen	165	1,164	7.04
Other ⁴²	-	448	-
Total Wholesale Value	-	3,532	-
<u>SQUID</u>			
Landed	88	122	1.39
Processed: ⁴³			
Fresh or Frozen	16	23	1.41
Fresh and Frozen Bait	72	97	1.36
Total Wholesale Value	-	120	-

TABLE 34 - CONT'D

<u>SPECIES</u>	<u>QUANTITY</u> <u>(Tonnes)</u>	<u>VALUE</u> <u>(\$'000)</u>	<u>AVG. PRICE²</u> <u>(\$/KG)</u>
<u>STURGEON</u>			
Landed	5	11	2.20
Processed:			
Fresh	<u>2</u>	<u>11</u>	<u>4.75</u>
Total Wholesale Value	-	11	-
<u>TUNA</u>			
Landed (B.C. Ports) ⁴⁵	37	108	2.92
Processed:			
Frozen	137	462	3.36
Other ⁴⁶	<u>-</u>	<u>17</u>	<u>-</u>
Total Wholesale Value	-	479	-
<u>TURBOT</u>			
Landed	340	88	0.26
Processed:			
Fillets, Fresh	33	69	2.12
Fillets, Frozen	63	164	2.60
Other ⁴⁷	<u>-</u>	<u>27</u>	<u>-</u>
Total Wholesale Value	-	260	-
<u>MISCELLANEOUS FISH</u>			
Landed ⁴⁸	1,029	608	0.59
Processed:			
Other Products ⁴⁹	<u>-</u>	<u>4,498</u>	<u>-</u>
Total Wholesale Value	-	4,498	-

TABLE 34 - CONT'D - FOOTNOTES

- 1 Any discrepancy in value figures is due to rounding.
- 2 Average price is based on totals prior to rounding.
- 3 Included in "other clams".
- 4 Includes canned, nectar and other butter clam products.
- 5 Includes horse clams.
- 6 Includes bait, horse clam body and neck meat and other products.
- 7 Includes other dogfish products.
- 8 Includes frozen and other eulachon products.
- 9 Includes fresh/frozen dressed flounder, frozen fillets and other flounder products.
- 10 Includes blocks, roe and other Pacific cod products.
- 11 Includes frozen hake, canned and other products.
- 12 Includes halibut products derived from imported halibut.
- 13 Includes frozen fletches, blocks and other halibut products.
- 14 Includes herring spawn on kelp.
- 15 Includes mature and immature roe, some of which was derived from imported herring.
- 16 Includes fresh herring and sardines, dry salted, pickled, fillets, milts and other herring products.
- 17 Includes frozen lingcod steaks, surimi and other products.
- 18 Includes meat, fresh, 128 oz., I.Q.F. breaded, canned and other oyster products.
- 19 Includes fresh dressed, blocks and other Pacific Ocean Perch products.
- 20 Includes frozen, roe, surimi and other pollock products, some of which was derived from imported pollock.
- 21 Included in rockfish.
- 22 Includes other red snapper products.
- 23 Includes blocks and other rockfish products.
- 24 Includes salmon roe.
- 25 Includes salmon products derived from imported salmon.
- 26 Includes specialty packs.
- 27 Includes "No. 1 Grade" and "other grades."
- 28 Includes offal, oil, heads, bait, milts and other salmon products.
- 29 Includes freshwater trout.
- 30 Includes other farmed salmon products.
- 31 Includes sea cucumber products derived from imported sea cucumber.
- 32 Includes fresh sea cucumber, sea cucumber skins and other sea cucumber products.
- 33 Includes sea urchin products derived from imported sea urchins.
- 34 Includes bulk roe and other sea urchin products.
- 35 Includes other shrimp products.
- 36 Includes frozen skate and other products.
- 37 Included in "other sole."
- 38 Includes frozen round dover sole, fresh/frozen dressed products and other dover sole products.
- 39 Includes frozen round english sole, fresh/frozen dressed products and other english sole products.
- 40 Includes fresh/frozen dressed petrale sole and other sole products.
- 41 Includes frozen round, fresh/frozen dressed and other rock sole products.

TABLE 34 - CONT'D - FOOTNOTES

- 42 Includes frozen round, fresh/frozen dressed, blocks and other sole products.
- 43 Includes products derived from squid originating from outside B.C. waters.
- 44 Less than \$500.
- 45 Does not include 128 tonnes worth \$403,628 caught in U.S. and international waters and landed in Canada by Canadian fishermen.
- 46 Includes fresh, smoked and other tuna products. Also includes tuna products derived from imported tuna (U.S. or International water origin).
- 47 Includes fresh and frozen round turbot, blocks and other turbot products.
- 48 Includes non food fish, idiotfish, plankton, shark, anchovies, crayfish, hagfish, other fish and shellfish n.e.s.
- 49 Includes "other groundfish," "portions, sticks and specialty" products some of which may contain imported fish, "other shellfish," fish meal n.e.s., fish oil n.e.s. and marine plants.

III. LICENCING OF THE B.C. FISHING AND FISH PROCESSING SECTORS - 1988

The total number of personal commercial fishing licences issued by the Department of Fisheries and Oceans in 1988 decreased by 5 percent from 18,542 in 1987 to 17,627. Due to the fact that 1988 was the seventh year in which a 5 year licence was issued, the overall change in numbers of licences issued may not actually reflect a change in the number of people licenced to fish - i.e. holders of 5 year licences only renew every five years. A total of 1,567 5 year licences, as well as 16,060 traditional 1 year licences were issued compared to 1,987 and 16,555 issued in 1987, respectively. It should be noted that 5,236 5 year licences issued in previous years were valid during 1988, bringing the total number of eligible fishermen to 21,296.

Overall the number of licences issued by the Department of Fisheries and Oceans for limited entry commercial fisheries remained relatively constant for the eighth consecutive year. All categories of limited entry licences displayed only minor fluctuations. There were, however, some significant increases in the number of unlimited entry (Z) fisheries licences issued. Approximately one-half showed increases over 1987, most notably six-gill sharks and goose barnacle, however, anchovy showed a decline. The third year of a new Z licence (N) for rockfish by hook and line gear showed a continued increase in the number of licences issued. The Z (A) licence was reassigned in 1988 to green sea urchin.

Each facility or operation in British Columbia, which processes or buys fish, is required to be licenced by the Ministry of Agriculture and Fisheries. Decals are issued with the licence to specify the category of processing or buying which they may undertake. Therefore, each licence may have multiple decals associated with it.

The number of fish processing licences issued by the Ministry of Agriculture of Fisheries increased by 5 percent in 1988, from 237 to 248. The number of processing licence decals issued rose slightly for most categories except for commercial salmon cannery and roe herring which declined. A total of 3 marine plant processing licence decals were issued in 1988.

The number of fish buying licence decals issued to persons and/or companies increased in the salmon and roe herring category, but declined for finfish and invertebrates. A total of 494 licences were issued in 1988, compared to 463 in 1987, an increase of 6 percent. Specifically, the number of fish buying decals issued were: 294 for salmon, 209 for roe herring, 116 for other finfish and 87 for invertebrates. A total of 149 fisherman's vending licences were also issued in 1988, as compared to 181 in 1987. Finally, 258 oyster picking permits and 37 marine plant harvesting permits were issued by the Ministry of Agriculture and Fisheries.

TABLE 35 - PERSONAL COMMERCIAL FISHING LICENCES ISSUED BY
THE DEPARTMENT OF FISHERIES AND OCEANS: BY DISTRICT 1986-1988¹

	1986		1987		1988	
	1 Year	5 Year ²	1 Year	5 Year ²	1 Year	5 Year ²
KAMLOOPS	8	-	8	-	15	-
NEW WESTMINSTER	2,267	234	2,355	310	2,282	346
NANAIMO	3,965	82	4,772	208	4,450	180
PORT ALBERNI	1,350	12	1,540	37	1,420	25
CAMPBELL RIVER	2,344	158	2,281	165	2,219	138
PRINCE RUPERT	2,380	113	2,115	374	2,233	203
VICTORIA	1,458	64	1,466	138	1,538	127
VANCOUVER	1,938	258	1,944	755	1,864	548
WHITEHORSE	85	-	74	-	39	-
TOTAL	15,800	921	16,555	1,987	16,060	1,567

1 Information provided by the Licencing Section, Department of Fisheries and Oceans.

2 A total of 4,233 5 year licences were valid during 1986, 5,186 during 1987 and 5,236 during 1988.

TABLE 36 - COMMERCIAL FISHING LICENCES ISSUED BY

THE DEPARTMENT OF FISHERIES AND OCEANS:

BY FISHERY AND LICENCE CATEGORY

1986 - 1988¹

<u>FISHERY</u>	<u>LICENCE CATEGORY</u>	<u>1986</u>	<u>1987</u>	<u>1988</u>
Salmon				
General	A	3,679	3,677	3,687
Seine	A	548	549	549
Temporary	B	5	2	2
N.N.F.C. ²	N	<u>253</u>	<u>253</u>	<u>253</u>
Salmon Subtotal		4,485	4,481	4,491
Roe Herring				
Gillnet	H	1,327	1,327	1,327
Seine	H	<u>252</u>	<u>252</u>	<u>252</u>
Roe Herring Subtotal		1,579	1,579	1,579
Spawn on Kelp	J	28	28	28
Halibut	L	432	433	435
Groundfish Trawl	T	142	141	142
Shrimp Trawl	S	249	248	249
Sablefish	K	47	47	47
Abalone	E	26	26	26
Geoduck	G	55	55	55
Selected Species	C	1,092	1,069	1,084

¹Information provided by the Licencing Section, Department of Fisheries and Oceans, Pacific Region.

²Northern Native Fishing Corporation exclusive licences.

TABLE 37 - COMMERCIAL FISHING LICENCES ISSUED BY
THE DEPARTMENT OF FISHERIES AND OCEANS:
SPECIAL FISHERIES (Z) - UNLIMITED ENTRY - 1986 -1988¹

		1986	1987	1988
B. Unlimited Licences				
Packing	D	211	187	182
Processor	P	7	10	11
Special Fisheries - Fishing with a Vessel Z				
Green Sea Urchin ²	Z-A	-	-	89
Weathervane Scallops	Z-B	1	5	5
Red Sea Urchin	Z-C	103	184	184
Sea Cucumber	Z-D	63	151	160
Squid Species	Z-E	61	69	72
Euphausiid	Z-F	11	18	31
Copepod	Z-G	0	0	0
Shrimp	Z-H	551	698	677
Pink or Spiny Scallop	Z-I	24	29	34
Octopus	Z-J	91	167	188
Anchovy	Z-K	18	28	9
Surf and Pile Perch	Z-L	20	26	25
Herring other than Roe				
Herring	Z-M	-	25	18
Rockfishes	Z-N	1,362	1,935	2,105
Six-gill sharks	Z-O	0	17	35
Special Fisheries - Fishing Without a Vessel Z				
Mussel	Z-1	9	25	43
Welk	Z-2	0	0	0
Winkles	Z-3	0	0	0
Top Snail	Z-4	0	0	0
Limpet	Z-5	0	0	0
Goose Barnacle	Z-6	25	221	467
Octopus	Z-7	13	19	19
Smelt	Z-8	34	44	67
Eulachon	Z-9	1	2	5

1 Information provided by the Licencing Section, Department of Fisheries and Oceans, Pacific Region

2 Licence category Z-A reassigned to Green Sea Urchin in 1988.

**TABLE 38 - FISH PROCESSING, FISH BUYING AND
FISHERMEN'S VENDING LICENCES ISSUED BY THE MINISTRY
OF AGRICULTURE & FISHERIES:
BY LICENCE TYPE - 1986 - 1988¹**

	<u>1986</u>	<u>1987</u>	<u>1988</u>
<u>Processing Licence Decals</u>			
Commercial Salmon Cannery	14	14	13
Sport Caught Salmon Cannery	1	1 ²	- ⁴
Salmon	105	118	129
Roe Herring	31	37	35
Fin Fish	82	97	97
Invertebrates	105	116	129
Cold Storage:			
a. over 80 m ³	63	74	77
b. under 80 m ³	53	51	54
Marine Plants	2	4	3
Non-human consumption	-	7	9
<u>Buyer Licence Decals</u>			
Salmon	273	290	294
Roe Herring	185	185	209
Fin Fish	113	132	116
Invertebrates	83	106	87
<u>Fisherman's Vending Licences</u>	203	181	149
<u>Oyster Picking Permits</u>	300	412	258
<u>Marine Plant Harvesting Licences</u>	36 ³	52 ³	37 ³

- 1 Fish processing and buying licences are assigned decals which indicate the category of processing or buying that may be conducted, as such, a licence may have multiple decals. Covers the fiscal year April 1 to March 31.
- 2 In 1987 six companies were licenced to can sport-caught fish, five were already covered by commercial salmon cannery licences while the other was exclusively licenced as a sport-caught cannery. In 1985 and 1986 all sport-caught canneries were already licenced as commercial canneries.
- 3 Includes licences issued for salicornia industry development, 14 issued in 1986, 13 in 1987 and 10 in 1988.
- 4 In 1988, the Sport-Caught Salmon Cannery category was included in the category called Sport-Caught Fish Processing. There were nine companies licenced to process sport-caught fish in 1988, although only two were licenced exclusively for sport-caught fish processing.

TABLE 40 - CANADIAN CONSUMER PRICE INDEX FOR ALL ITEMS AND
SELECTED FOOD ITEMS FOR 1975 - 1988

1981 = 100

<u>YEAR</u>	<u>ALL ITEMS</u>	<u>FISH</u>	<u>POULTRY</u>	<u>MEAT¹</u>
1975	58.5	50.0	61.2	n/a
1976	62.9	55.0	63.1	n/a
1977	67.9	60.7	63.3	n/a
1978	73.9	69.2	72.7	n/a
1979	80.7	76.9	82.4	89.6
1980	88.9	87.4	86.1	100.0
1981	100.0	100.0	100.0	102.6
1982	110.8	109.5	104.4	102.8
1983	117.2	115.0	107.8	107.7
1984	122.3	120.6	114.6	111.0
1985	127.2	125.7	113.0	116.6
1986	132.4	132.0	122.0	127.1
1987	138.2	146.8	128.6	127.5
1988	143.8	159.3	129.9	127.5

Source: - Canada, Statistics Canada, Consumer Prices and Price Indexes,
October - December, 1984. Ottawa: Supply and Services
Canada, March 1985.

- Table 8: Consumer Price Index for Canada, All Items,
1973-1984, p. 24.

- Table 9: Consumer Price Index for Canada - Main
Components, Sub-groups and Selected Items, pp. 25-26.

- Personal Communication, Statistics Canada, July 12, 1985.
- Personal Communication, Statistics Canada, Sept. 11, 1986.
- Personal " " " Dec. 22, 1987
- Personal " " " Feb. 28, 1989
- Personal " " " Nov. 14, 1989

¹ Excludes poultry - Revised from previous editions.

IV. GLOSSARY OF TERMS AND IMPORTANT NOTES

Landings Data:

All commercial fish landings or catch data is provided by the Department of Fisheries and Oceans.

Standard form or landed weight:

- Salmon - Troll and Handline are reported dressed weight head-on unless otherwise specified.
- Seine and Gillnet are reported round weight.
- Halibut is reported dressed weight head-off.
- All other fish are reported as round weight.

Round weight is the weight of the whole fish as it comes from the water before any treatment or dressing.

Landed Value:

Prior to 1984, salmon landed values published did not include bonus payments. Consequently, payments made to fishermen, particularly for net caught salmon, were under-reported. Since 1984, salmon landed value is defined as the initial payment to fishermen including any additional adjustments and bonuses.

One metric tonne, or 1000 kilograms (kg), equals 2,204.6 pounds (lb.).

Terms:

Over the sides sales refers to cooperative fishing arrangements, or joint ventures, of Canadian fishermen delivering groundfish, usually hake, to foreign vessels.

Wholesale value represents gross sales based upon company invoices (F.O.B. processing plant) for fish products.

Net selling value refers to pricing information on canned salmon products and reflects the final selling price after promotions, case allowances, cash discounts and other trade discounts which may apply.

Wholesale price is the average price based on the total wholesale value divided by total quantity of that product. It reflects a true weighted average price of that product, incorporating price fluctuations over the calendar year.

Glossary of Terms and Important Notes - CONT'D

Salted/Mild Cured Salmon includes salmon products prepared by either brining or dry salting for human consumption.

Cold smoked salmon includes all products which are both brined and cold smoked.

Hot smoked salmon includes products which are brined and hot smoked or cooked - may include barbequed products.

Specialty Smoked Salmon Products are specialty packed smoked salmon products or products which are derived from smoked salmon. These may include smoked salmon pate and butter as well as "other" products.

Portion Pack/Specialty Products include specially packaged salmon products such as individual portion and food service portion packs. These may include a variety of packaging technologies.

N.E.S. refers to not elsewhere specified.

1. Reporting of all catches to the Dept. of Fisheries and Oceans is the responsibility of the fisherman and a condition of licence renewal.
2. Accurate catch reports must include the map number or numbers showing the area in which your fish were caught.
3. The statistical areas shown on this map are to be used as a guide only. For more exact information refer to the Pacific Fishery Management Area Regulations.

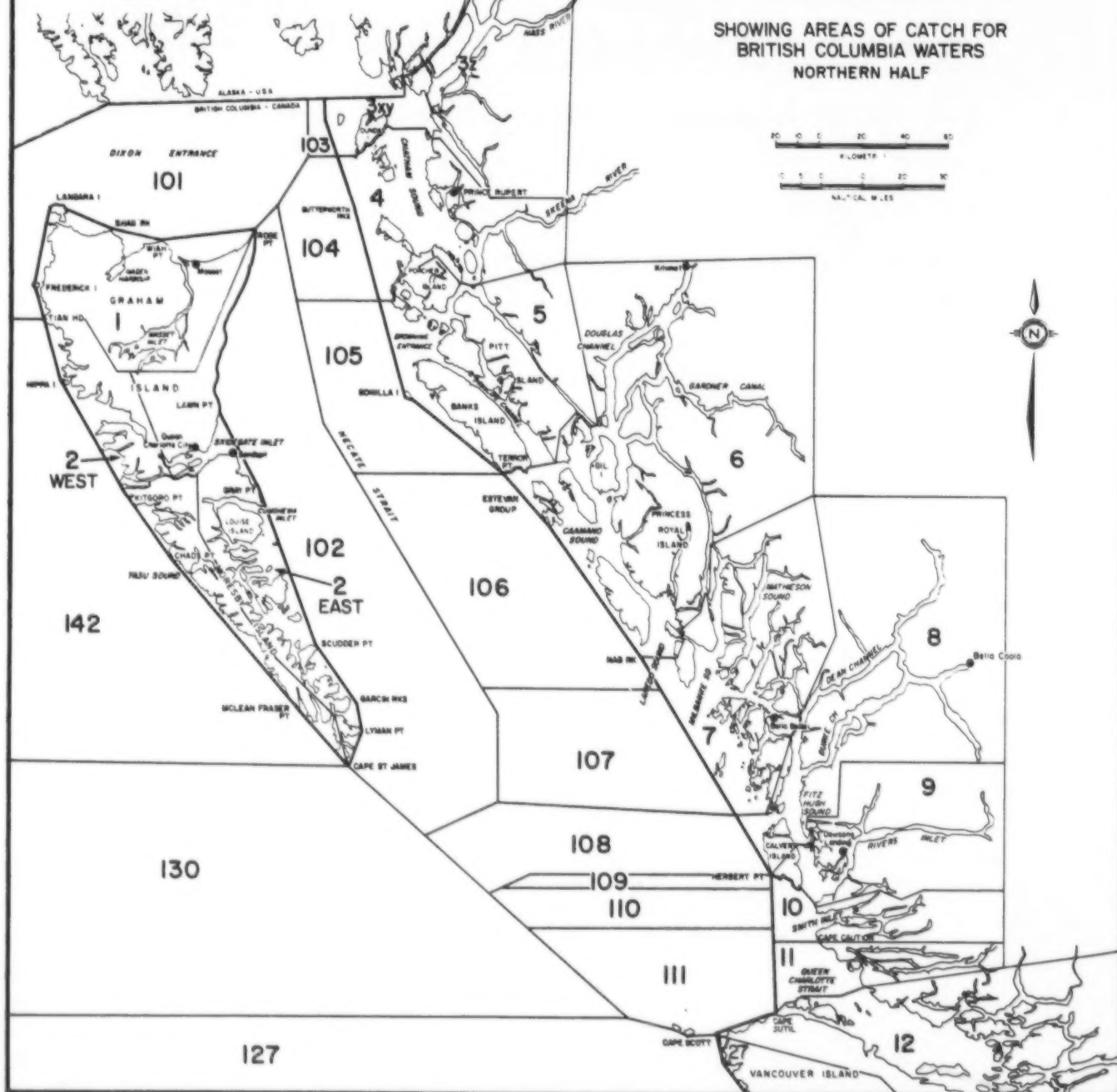
Fisheries
and OceansPêches
et Océans

Canada

- Dept. of Fisheries and Oceans Office
— Statistical areas are divided by red lines
— Surfline

Note: All orders revised February 1988.

SHOWING AREAS OF CATCH FOR
BRITISH COLUMBIA WATERS
NORTHERN HALF



1. Reporting of all catches to the Dept of Fisheries and Oceans is the responsibility of the fisherman and a condition of licence renewal
2. Accurate catch reports must include the map number or numbers showing the area in which your fish were caught
3. The statistical areas shown on this map are to be used as a guide only. For more exact information refer to the Pacific Fishery Management Area Regulations

Note: All crosses revised February 1985



Canada

**SHOWING AREAS OF CATCH FOR
BRITISH COLUMBIA WATERS
SOUTHERN HALF**

